

## **4. Comprehensive Program**

### **4-1. Comprehensive Program for Promotion of Mold and Die Industry**

#### Package of Measures [1]

"Private-Sector-Oriented Services by the Government Aimed at Increasing Skilled Labor and Raising the Level of Production and Management."

The effective use of the government institution MIDI by private industry, established with the cooperation of Japan, would be extremely important and effective for the development of Thailand's mold and die industry.

In particular, for the most effectiveness in its activities, it will be essential to quickly train consultants and provide services for private business (in particular the SMEs ).

#### (Program)

##### **Active Use of MIDI Functions**

Positive use should be made of the functions of MIDI so as to organize industry and raise the level of private SMEs. Toward this end, the following measures might be considered:

- Invitations of experts in organizing industry
  - Invitations of foreign experts with experience in organizing and running industrial organizations in the field of metalworking.
- Expansion of vocational training programs for private business (including night-time)
  - Organization of short term courses, night courses, etc. which could be expected to be effective for private SMEs and to which employees could easily be sent.
- On-the-job training of skilled labors in private businesses using MIDI facilities
  - Bringing to MIDI by mold and die manufacturers of part of the mold and die production ordered along with their employees for on-the-job training.
- Provision of information to private business through industrial associations
  - Information service for issuance of journals by mold and die industrial association, mentioned later.
- Establishment and operation of scholastic associations
  - Organization and operation of scholastic associations of engineers on industry level.

## Package of Measures [2]

### "Raising Level of Skills and Management Through Activities of Organization of Industry"

Establishment of industrial organizations and provisions of services through the same are essential for the development of the Thai mold and die industry, which as yet has no such industrial organization.

#### (Program)

##### **Establishment and Activities of Mold and Die Industry Association**

- Vocational training for member companies through use of MIDI facilities (mentioned above)
  - PR activities, canvassing, and introductions on training and seminars of MIDI aimed at member companies.
- Arrangement of on-the-job training using MIDI facilities (mentioned above)
  - PR, canvassing, and introductions for on-the-job training program mentioned above.
- Technical and management consulting for member companies
  - Employment of experts in design, production technology, management, accounting, etc. and provision of consulting services and roving guidance etc. to member companies.
- Publication and distribution of "Mold and Die Journal"
  - Editing, publication, and distribution to member companies of journal including information believed useful to small- and medium-sized mold and die manufacturers.
- Seminars for member companies on design, processing technology, process control, management, and accounting
  - Organization of seminars, study sessions, etc. on themes desired by large numbers of member companies.
- Consideration of cooperative projects (joint purchases of materials and machinery, establishment of joint factories, etc.)
  - Consideration, as a future issue, of cooperative projects benefiting member companies in common and execution of possible projects.
- Exchanges with foreign mold and die industry associations
  - For the time being, participation in international organizations now being formed by Japan and other nations of Asia, exchange of information, exchange of technology, etc.

### Package of Measures [3]

#### "Improvement of Level of Production, Technology, and Management Through Investments by Foreign Companies"

To raise the level of technology and management in accordance with the increase in demand for molds and dies, investments by foreign companies and establishments of joint ventures would be considered extremely effective. Already, some foreign companies are making use of the BOI schemes for investment. This trend must be further promoted in the future.

(Program)

#### **Matching up of foreign mold and die manufacturers, and Thai mold and die users, in particular**

Promotion of investments by small- and medium-sized foreign mold and die manufacturers (foreign industries are also principally comprised of small businesses) and establishment of joint ventures with leading domestic Thai mold and die users (plastic workers, automobile and electronic component makers, etc.) - considered of considerable promise.

- Active use of BOI scheme
  - Positive, active use of BOI investment incentives for investments by foreign manufacturers and establishment of joint ventures, in view of effectiveness of incentives.
- Establishment of metalworking industrial estate in accordance with need
  - Consideration to establishment of metalworking industrial estate, in case of need, upon investment and joint ventures by foreign manufacturers, in view of problems in use of BOI incentives and securing of sites.

### Package of Measures [4]

#### "Joint Project for Training Skilled Workers"

With mold and die demand rising in the export-oriented industries etc., a severe shortage has occurred in skilled mold and die technician, necessitating an urgent training program. In this regard, it would be effective to obtain cooperation from educational institutions which have proven effective in training skilled labor.

(Program)

#### **Emergency Program for Training Mold and Die Workers**

In view of the urgent need for training skilled labor, an emergency training program run jointly by MIDI and the King Monkhut Institute of Technology may be run.

The annex school of King-Monkhut has been producing results in training of mechanical workers, but suffers from a shortage of instructors and facilities compared with demand and has a little capacity. It would be desirable to establish two courses in the program:

- Newcomer training course
- Retraining course

The necessary equipment would have to be provided and the instructors secured (including foreign experts) etc.

#### **Package of Measures [5]**

##### **"Financing, Tax, and Tariff Privileges for Modernization of Equipment and Reinforcement of Competitiveness"**

Much of the equipment of the SMEs is old fashioned and antiquated. To meet with demand, replacement of the equipment and modernization are considered unavoidable.

(Program)

#### **Establishment of Policy Scheme for Promoting Mold and Die Industry**

The following privileges may be given to members of the mold and die industry association. (In view of the meaning of the promotion of organization of the industry, it would be desirable to give preferential treatment to member companies, but if this were difficult, then a "designated industry" scheme could also be considered.)

- Designation as an industry for investment promotion of the BOI (clear indication of same)
  - At the present time, examinations are made case by case, but it is believed that display of a clear stance welcoming "molds and dies" or "metalworking" would be effective for promoting investments in the industry.
- Exemption on import duties for metalworking machinery (including inspection and test equipment, tools, etc.)

- Limited duration tariff exemptions (when imports are not covered by the BOI scheme) would be desirable for important machinery for fabrication of molds and dies (either industry designation or model designation possible).
- Positive application of institutional financing (in particular SIFO) to mold and die industry
  - The special scheme of low interest financing (policy loans) now under consideration at the SIFO might be applied to the mold and die industry.
- Abatement of taxes on turnover (to level comparable to export companies)
  - The drawback system of taxes on materials etc. allowed for export companies could be applied as well to mold and die manufacturers contributing to exports.

#### Package of Measures [6]

##### "Nurturing of Engineers and Skilled Workers"

There is an overwhelming shortage in engineers and skilled workers throughout the mold and die and the metalworking industries and measures to cope with this in the educational field are extremely important.

##### (Program)

##### **Expansion of Engineering Training at University and High School Levels**

In addition to the above-mentioned emergency training program, there is a great need for improving education overall. This must be done by:

- Training instructors
- Increasing the enrollment in engineering courses at university engineering departments
- Increasing the enrollment in the metalworking departments of vocational schools, etc.

Table IV-6 Programme for Promotion of Mold & Die Industry (1)

COUNTERMEASURE PACKAGE	PROGRAMME	METHOD AND SCHEDULE			
		1st year	2nd year	3rd year	4th year & after
<p>Service activities for improvement of skill, production and management, to private sectors by governmental organization</p> <p>It's vitally important and efficient for the development of Thai mold &amp; die Industry that private industries could make the efficient use of MIDI, a governmental organization which was established by Japanese grant aid (1.6 bio yen).</p>	<p>Usage of MIDI function MIDI (Mezal-Working and Machinery Industries Development Institute) should be used in a direction for organizing the industrial association and for improving private SMEs .</p> <ul style="list-style-type: none"> <li>• Invitation of the specialist of organizing the industrial association.</li> <li>• Enlargement of skill-training (night course included) for private enterprises.</li> <li>• Usage of MIDI facilities for OJT for skilled workers in private enterprises.</li> <li>• Information supply for private enterprises via manufacturers association.</li> <li>• Establishment and management of academic conference.</li> </ul>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>
<p>Activities for the improvement of skill &amp; management by organizing industrial association</p> <p>For the moment Thai mold &amp; die industry doesn't organize manufacturers association. It's indispensable for this industry's development to establish manufacturer's association firstly and to supply information through the network.</p>	<p>Establishment of Mold &amp; Die Manufacturers Association</p> <ul style="list-style-type: none"> <li>• Skill training for member companies using MIDI facilities</li> <li>• Arrangement of OJT using MIDI facilities</li> <li>• Technical and Management Consulting Invitation of the specialist for member companies</li> <li>• Publication &amp; distribution of Information magazine for Mold &amp; Die manufacturers.</li> </ul>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>	<p>○</p> <p>○</p> <p>○</p> <p>○</p>

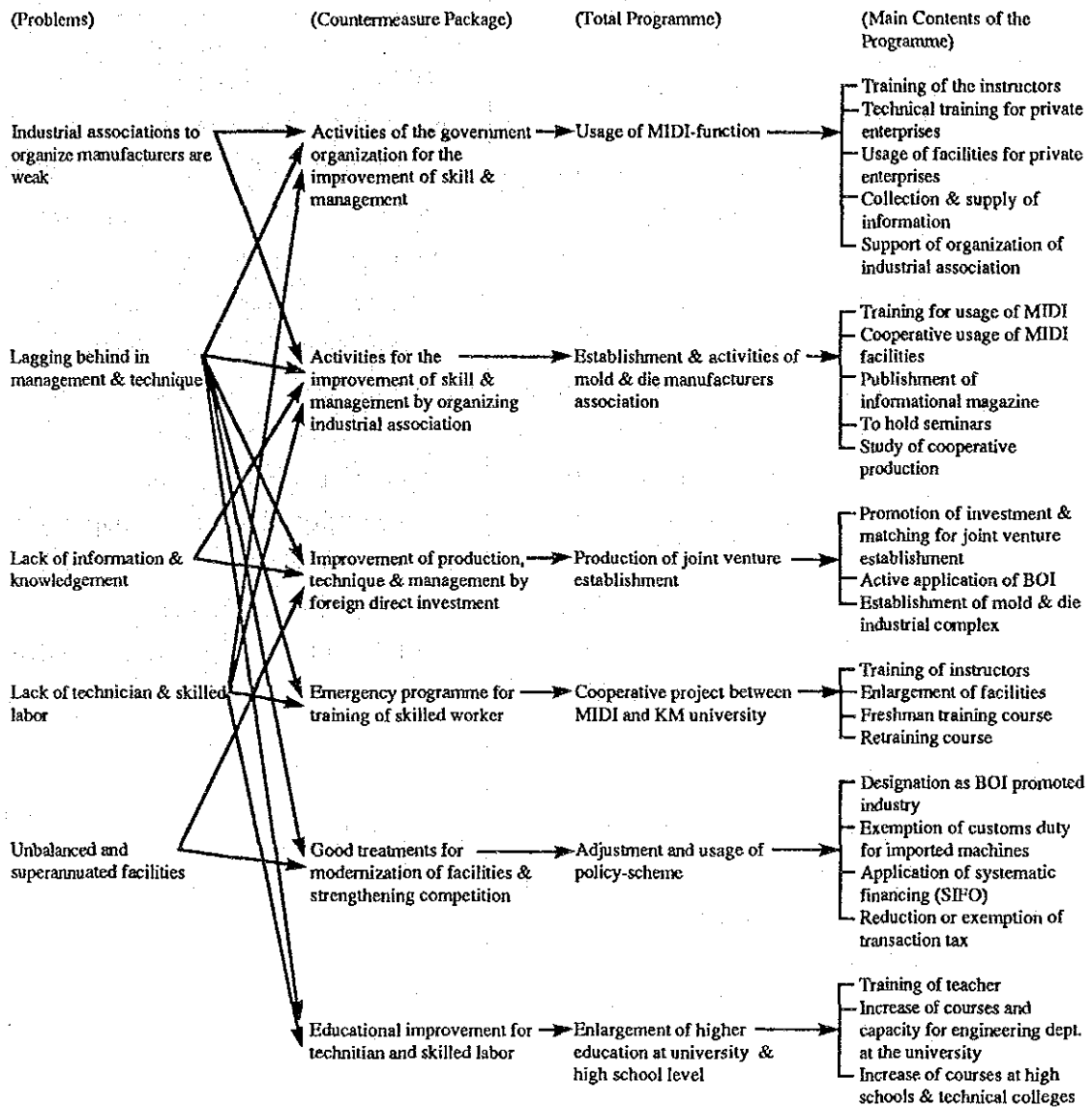
Table IV-6 Programme for Promotion of Mold & Die Industry (2)

COUNTERMEASURE PACKAGE	PROGRAMME	METHOD AND SCHEDULE			
		1st year	2nd year	3rd year	4th year & after
<p>Improvement of production, technique and management by foreign direct investment. Foreign direct investment and/or establishment joint venture are considered to be vitally efficient to cope with the demand increase of mold &amp; die and to improve their technical/managerial level.</p> <p>Enforcement of cooperative project for skilled workers training. Training plan for skilled worker is urgently required, since the lack of skilled worker is serious in the increase of molds &amp; die demand by export oriented industries.</p>	<p>•Seminars for the associated member about designing, processing technique, process control, management and accounting</p> <p>•Study of cooperative production (Joint purchase of material and machine, establishment of cooperative factory)</p> <p>•Communication with foreign association</p> <p>Promotion of joint venture establishment</p> <p>•Especially, matching of foreign mold &amp; die manufacturers with local mold users.</p> <p>•Usage of BOI scheme</p> <p>•Establishment of metal working industrial complex acc. to the necessity</p> <p>Emergency programme for metal mold worker training</p> <p>To enforce emergency training programme by cooperation with MIDI, King-Monkhut Technical University (also Mold &amp; Die manufacturer's association) taking the emergency of skilled worker training. (Technical college attached to King-Monkhut University is fruiting, however, they are lack of materials &amp; equipment and their capacity is too small.)</p>	○	○	○	○
		<p>Invitation of the lecturers</p> <p>On the spot training</p> <p>Investment</p> <p>Promotional activity</p> <p>Supply of material</p> <p>Invitation of instructors</p>	○	○	○





Chart IV-3. Total Programme for Promotion of Mold & Die Industry



Step-by-Step Program for Active Use of MIDI Functions and Establishment of Mold and Die Industry Association		
	MIDI	Mold and Die Industry Association
First Stage	<ul style="list-style-type: none"> <li>• Invitation of experts in organizing industry               <ul style="list-style-type: none"> <li>- Invitation of foreign experts with experience in organizing and operating industrial organizations</li> </ul> </li> <li>• Preparation of vocational training for private businesses               <ul style="list-style-type: none"> <li>- Consideration and preparation of curriculum, methods of execution, etc. for vocational training to produce skilled workers for private small businesses. Further, securement of instruction for same</li> </ul> </li> <li>• Preparations for OJT for skilled workers of private businesses               <ul style="list-style-type: none"> <li>- Consideration and preparation of program of OJT at MIDI for processing actual orders accepted by small and medium sized mold and die makers (including training of instructors).</li> </ul> </li> <li>• Preparation for supply of information               <ul style="list-style-type: none"> <li>- Consideration and preparation of system for collection and supply (including translation) of useful information and data to private mold and die makers.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of group of representatives of private businesses               <ul style="list-style-type: none"> <li>- Establishment of group comprised of representatives of private business to promote effective use of MIDI. Summarization of demands etc. of private business on vocational training, OJT for skilled workers, provision of information, etc. mentioned in left column.</li> <li>- It is envisioned that this group would form the original body of the Mold and Die Industry Association.</li> </ul> </li> <li>- MIDI would act as the administrative office.</li> </ul>
Second Stage		<ul style="list-style-type: none"> <li>• Establishment of Mold and Die Industry Association (or club)               <ul style="list-style-type: none"> <li>- At first, the administrative offices of the above-mentioned representative group could be used as the administrative office of the Association.</li> <li>- Call to mold and die makers, including</li> </ul> </li> </ul>

MIDI		Mold and Die Industry Association
Second Stage	<ul style="list-style-type: none"> <li>• Start of provision of information for "the information journal" <ul style="list-style-type: none"> <li>- In particular, provision to industrial association of information useful to small and medium sized mold and die makers and of PR articles on MIDI activities.</li> </ul> </li>   <li>• Start of vocational training and OJT for skilled workers <ul style="list-style-type: none"> <li>- Implementation of training and OJT considered and prepared for in first stage. (Consideration given also to establishment of "night course" for private SMEs.)</li> </ul> </li> </ul>	<p>SMEs and including in-house production divisions and makers in peripheral industries. Invite participation of interested companies as members. Initial membership fees should be kept as low as possible (about amount for subscription to "journal").</p> <ul style="list-style-type: none"> <li>• Issuance and distribution of "journal" <ul style="list-style-type: none"> <li>- Issuance of "journal" based on information supplied from MIDI and distribution of same to members of Association.</li> <li>- PR for MIDI vocational training, OJT for skilled workers, and other services to also be made through "journal".</li> </ul> </li>   <li>• Participation and cooperation in MIDI training activities <ul style="list-style-type: none"> <li>- Recommendations on and introductions to participation in the vocational training and OJT mentioned in the left column for member companies.</li> </ul> </li>   <li>• Recommendations for membership <ul style="list-style-type: none"> <li>- Recommendations for membership to nonmember mold and die makers through PR of "journal" and PR of use of MIDI.</li> </ul> </li> </ul>
Third Stage		<ul style="list-style-type: none"> <li>• Establishment of independent administrative office for the Association <ul style="list-style-type: none"> <li>- Establishment of administrative office independent from MIDI for the Association.</li> </ul> </li> </ul>

	MIDI	Mold and Die Industry Association
Third Stage	<ul style="list-style-type: none"> <li>• Continuation of information supply, vocational training, and OJT for skilled workers</li> <li>• Support to Mold and Die Industry Association               <ul style="list-style-type: none"> <li>- Support to and promotion of the Association from administrative side, including promotion of use of MIDI functions.</li> </ul> </li> <li>• Establishment and operation of academic society               <ul style="list-style-type: none"> <li>- Organization and operation of an academic society comprised primarily of industrial level engineers (at the beginning, MIDI to serve as administrative office).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Technical and management consultation activities               <ul style="list-style-type: none"> <li>- Employment by the Association of experts in technology and management (including finances) and offering of consulting and guidance by visits etc. upon request from member companies (in particular the small and medium sized mold and die makers).</li> </ul> </li> <li>• Training and seminars               <ul style="list-style-type: none"> <li>- Training sessions and seminars on themes desired by member companies, for example, design, machining technology, process control, management, accounting, etc. (At this time, consideration may be given to use of MIDI facilities.)</li> </ul> </li> <li>• Consideration of joint projects               <ul style="list-style-type: none"> <li>- Consideration of possibilities for joint projects in form leading to common benefit based on requests from member companies, for example, joint purchase of materials and machinery and establishment of joint factories. Implementation of same when effective and feasible.</li> </ul> </li> <li>• Exchanges with foreign industrial associations               <ul style="list-style-type: none"> <li>- Exchange of information with foreign industrial associations, participation in international organizations, etc.</li> </ul> </li> </ul>

## Implementation of Emergency Program for Training Mold and Die Workers

In view of the urgency of securing skilled workers, an emergency training program should be carried out jointly by MIDI and King Mongkut's Institute of Technology (KMIT).

At present, the KMIT has established a training course for skilled workers based on the "Meister" system of West Germany. A summary of this is given below 1-3:

### 1. Object

Training of skilled workers. Persons completing the courses are given a "Meister" qualification.

### 2. Course

The course aims at strengthening both practical and theoretical aspects. (In Thailand, there is a tendency to neglect practical skills.)

The duration of an initial course is three years, followed by five years and then two years, for a total of 10 years.

The first three years are devoted to practical skills. Vocational training is given four times a week, with theory added, and practical training is given twice a week at the dispatching company. For the next five years, the trainees are involved in practical work at the factories. At the same time, KMIT curricula are carried out with levels checked by testing. The final two years the students return to the KMIT and receive training in various specialized courses (including a course for molds and dies).

The practical skills cover basic areas such as filing and scraping to the operation of advanced machine tools. The theoretical courses include mathematics, machining theory, metallurgy, measurement principles, drafting, the labor law, and ethics.

### 3. Persons Covered

Persons dispatched from private enterprises, up to 40 persons a year.

### 4. Emergency Program

The emergency program being considered would broaden the current skilled workers training course ("newcomer's course") to a "retraining course" for persons with practical experience.

- There would be a total of 100 trainees in the two courses.
- The retraining course would extend over five years, the first three years for practical skills and theory, and the second two years for specialized courses. Persons eligible for the course would be graduates of vocational high schools or junior colleges having five years or more of practical experience.

- Due to the shortage of university teachers, it would be urgently necessary to train teachers.

Therefore, suitable persons will be sent overseas for training, and advisory instructors invited from overseas to provide guidance to the same.

The advisory instructors would handle the course for 6 years until the termination of training of the local instructors.

Facilities of MIDI and KIMIT will be mainly used. In addition, the following machines should be installed.

#### Additional Necessary Machines

(For manufacturing molds and dies for presses and plastics, very basic facilities)

(Unit: ¥ million)			
Vertical milling machine (NC, with profiling apparatus)	@27	2 sets	54
Vertical milling machine	@25	10 sets	250
Surface grinder	@10	2 sets	30
Profile grinder	@15	2 sets	30
Jig grinder	@15	2 sets	30
Jig boring machine	@30	2 sets	60
Setting machine	@10	2 sets	20
Press machine (50t)	@10	2 sets	20
NC programme	@8	2 sets	16
<b>Total</b>			<b>500</b>

- Curriculum and practical skills in a retraining course  
Duration: 5 years (the first 3 years for overall theory and training of practical skills and the remaining 2 years for specialized courses)

#### Curricula

- (1) Mechanical Engineering, Hydromechanics, Heat Conduction, Strength of Materials, Mechanism, Measurement (2 instructors)
- (2) Electric Engineering, Mathematics (1 instructor)
- (3) Design and drafting of molds and dies (2 instructors)  
Design and drafting of products

#### Practical Skills

- (1) Machining of molds and dies (2 instructors)
  - Manufacturing of auxiliary devices (including jigs)
  - Maintenance of hand tools, machinery and equipment
  - Boring • Centering
  - Jig boring and profile grinding
  - Turning, milling, EDM and die sinking
- (2) Finishing skills (assembly) of molds and dies (2 instructors (2) - (4))
  - Marking • Filing • Scraping

- Chiselling
- Drilling
- Polishing
- Assembly
- Sawing
- Reaming
- Soft and hard soldering
- Fitting
- Grinding

(3) Testing

- Measuring
- Try-out
- Fixing

(4) Modification

Practical Skills (Optional)

- Arc and gas welding
- Working with index heads
- Working on shaping, broaching and CNC machining
- Assembly of pneumatic and hydraulic components
- Designing of molds and dies
- CAD/CAM application
- Forging of parts and tools
- Basic computer programming

Allocation of Staff and Students

No. of Staff & Students	Year	1	2	3	4	5	6	7	8	9	10	11
Instructor		5	10	10	10	10	8	5	5	5	5	3
Partner		5	10	10	10	10	8					
Newcomer Course		25	50	50	50	50	50	50	50	50	50	25
Retraining Course		25	50	50	50	50	25	0	0	0	0	0

- Foreign experts invited as instructors for the first 6 years, promotion of partners to instructor's position after the 7th year
- Students chosen twice: the 1st year and the 2nd year  
The number of students accepted is 25 each for both the Newcomer and the Retraining Course in the 1st and 2nd years (total number 100).

Number of Lessons (curriculum, practical skills)

- 46 weeks/year, 4 days/week, 3h./day  
180 (day) x 3 (h.) = 540 h.  
540 (h.) x 5 (year) = 2,700 h.

Expenses

- Additional necessary machines ¥500 million
- Maintenance ¥10 million/year
- Tuition fee -- Provided from enterprises  
(The whole tuition fee ought to be refunded to the enterprises in case of retiring before completion of a course, or within 5 years after graduation)
- Wages and allowances -- 50% subsidiary from government during training

## 4-2. Comprehensive Program for Promotion of Toy Industry

### Package of Measures [1]

#### "Establishment and Operation of Central Body for Organization of Industry and Improvement of Management and Technological Level"

For sustained rapid growth as an export industry, it is essential to eliminate copies and crude products and to ensure quality and safety. The industry must cooperate as a whole toward this end with the help of the government. To realize this, a central body should be set up and run based on cooperation between the government and private sector.

#### (Program)

#### Establishment and Operation of Organization for Promotion of Toy Industry

Thailand may set up an organization serving principally as an inspection institute for the quality of toys and also provided with training facilities and information functions. The inspection institute could take the form of an independent nonprofit organization with facilities and equipment provided by the government. For this, the following means would have to be devised for the time being:

- Training of specialists in inspection
  - Candidates could be sent for training abroad so as to train a minimum of one expert each in the fields of chemical inspections and mechanical inspections.
- Establishment of inspection system
  - An inspection system could be newly established based on safety standards and quality standards. A mandatory inspection system would be preferable in view of promoting toys as an export industry.
- Establishment of authoritative inspection organization
  - Assuming the above two points, an organization could be established for performing inspections from a public standpoint. (However, it is considered that government support would be need in the form of provision of facilities and equipment.)
- Collection and dissemination of information (including collection and display of samples)
- Training and seminars on safety, design, product development, and production technology



- Strengthening of industrial organization (Toy Association) through such activities
  - The industrial organization could cooperate in the operation of the promotion organization and simultaneously engage in its own activities, such as information collection, training, and seminars, and services to members.
- Sponsoring of "International Toy Fair" in Bangkok
  - Consideration should be given, as a matter for the near future, to sponsoring an international toy fair in Bangkok each year so as to facilitate business talks with foreign buyers.

#### Package of Measures [2]

"Raising of Level of Production, Technology, Management, and Sales Capabilities Through Promotion of Investment by Foreign Enterprises, Establishment of Joint Ventures, Technical Tieups, Etc. "

There are believed to be large numbers of Japanese, Hong Kong, Taiwanese, and other foreign toy manufacturers which are interested in investing in Thailand or tying up with Thai companies. The possibilities for this should be exploited.

#### (Program)

##### Activities for Promotion of Investment, Joint Ventures, and Tieups

- Dispatch of investment and joint venture missions by BOI, Ministry of Industry, and toy makers
- Activities for attracting companies by BOI and Ministry of Industry, covering fields of peripheral industries as well
  - Apart from the general investment and joint venture promotional measures taken up until now, activities for the promotion of investment and joint ventures focused on the toy industry and peripheral industries would be effective. The regions covered by such activities should include Japan, Hong Kong, South Korea, Taiwan, the U.S., and the EC countries.
- Invitations of investment and tieup missions from abroad
  - As possible activities for promotion of investment and joint ventures, consideration may be given to not only dispatch of missions from Thailand and provision of materials and information, but also invitations

of interested foreign businessmen to Thailand to show them the state of the toy industry.

- Matching of joint ventures between interested companies
  - In the case of interest shown by domestic and foreign toy manufacturers, the BOI and Ministry of Industry or industrial bodies should engage in positive matchmaking.

#### Package of Measures[3]

#### "Strengthening of Sectoral Function of Ministry of Industry and of cooperation with Related Organization"

For growth of Toy Industry as an export industry, it's necessary to clarify the section and person in charge as its promoter. It's also required to embody promotion policies in linkage and cooperation with the related government organization and the industry.

(Program)

#### **Strengthening of Administrative Organization for Promotion of Toy Industry and Establishment of Policy Scheme**

- Establishment of Section and Staff in Ministry of Industry (Clarification)
  - To promote cooperation in development of the toy industry, it is necessary to establish a specific section and staff in the Ministry of Industry for overall control and promotion of promotional measures and cooperation among the related agencies and industry.
- Establishment of inspection system
  - As mentioned above. Full assistance from the Ministry of Industry would be required.
- Assistance in organization of industry
  - In formulating specific promotional measures, it is essential to strengthen industry organizationally. For this, positive support by the government section in charge will be required.
- Provision of the following privileges to member firms of the Toy Association
  - These would also be of important assistance in the organization of the industry.
- Application of institutional financing (IFCT, SIFO) to the toy industry
- Positive application of export financing (refinance system of central bank) to toy exports

- Exemption of tariffs on imported machinery (injection molding machines, sewing machines, cutting machines, etc.)

#### Package of Measures [4]

#### Strengthening of Export Promotion Activities of Ministry of Commerce and Cooperation with Ministry of Industry

For the expansion of exports of the toy industry of Thailand, including products of the SMEs, it is desirable to greatly strengthen and expand the activities of the Ministry of Commerce. At this time, full consideration should be given to coordination and cooperation with the Ministry of Industry.

(Program)

#### **Strengthening of Activities for Promotion of Toy Exports by Department of Export Promotion (DEP) of Ministry of Commerce**

- Strengthening of collection of information on overseas markets and industries and provision of same to industry (in cooperation with toy industry promotion organization mentioned above)
  - The DEP should cooperate with the Ministry of Industry and promotion organization for collection of information relating to the overseas toy industries and toy markets, summarize it, in particular information useful for the product development, production, and sales by small- and medium-sized toy makers, in a journal and distribute the same periodically. Further, it should continuously collect product samples overseas and display them domestically.
- Participation in trade fairs and increase in numbers of inspection and sales missions dispatched
  - To cope with the surge in toy exports, it would be desirable to provide increased assistance to participation in trade fairs and dispatches of missions.
- Strengthening of PR activities overseas for Thai toy industry
  - To raise the image of the Thai toy industry, PR activities would have to be conducted in the main markets.
- Training and seminars on overseas marketing etc.

- Training and seminars on overseas industries, markets, and product development could be offered to SMEs lacking knowledge about the situation overseas.

#### Package of Measures [5]

##### "Improvement of Design and Quality of Ethnic Dolls for Tourists"

The number of foreign tourists has been increasing. If the design and quality of ethnic dolls can be improved and sales channels established, there would be a great possibility for development of a new market. In particular, western tourists present a large source of demand for ethnic dolls as souvenirs. If the quality and design can be improved and sales channels established, there is a possibility for a large increase in sales.

(Program)

##### Technical and Management Guidance for Improvement of Ethnic Dolls

- Training for improving design and quality
  - Foreign experts could be invited to provide repeated training and seminars for designers and workers actually engaged in the fabrication of ethnic dolls. Along with this, on-the-job-training should be effective.
- Creation of organization for exploiting tourist market and establishment of sales channels
  - Consideration should be given to establishment of sales outlets aimed at foreign tourists at the airports, stations, hotels, near tourist areas, etc. and for sale of various products there.

Table IV-7 Programme for Promotion of Toy Industry (1)

COUNTERMEASURE PACKAGE	PROGRAMME	METHOD AND SCHEDULE			
		1st year	2nd year	3rd year	4th year & after
<p>A leading organ for organizing toy association and for improvement of management/technique will be set up and be managed.</p> <p>It's indispensable for toy industry to get rid of copies and inferior articles and to make sure of safety in cooperation with government in order to keep growing rapidly as an exporting industry.</p>	<p>Establishment/management of Toy Industry Promotion Organization</p> <p>The Organization will be set up with quality inspection organ specialized only in toys as the core. A toy association office, training center, and an organ for collection/supply of information and material are expected to be put aside.</p> <p>The Organization will be managed in the cooperation both with private and public sectors.</p> <p>Government equips an inspection organ with facilities and machines and lends them to an other organ in the 3rd sector.</p> <ul style="list-style-type: none"> <li>•Inspection expert will be nurtured</li> <li>•Inspection system will be set up</li> <li>•An authorized inspection organ will be set up.</li> <li>•Collection/supply of information is encouraged. (Collection/exhibition of samples included.)</li> <li>•Study and training seminars on safety, design, production development, production technique will be held.</li> <li>•Toy association will be strengthened through these activities.</li> </ul>				
		○	○	○	○
		○	○	○	○
		○	○	○	○
		○	○	○	○
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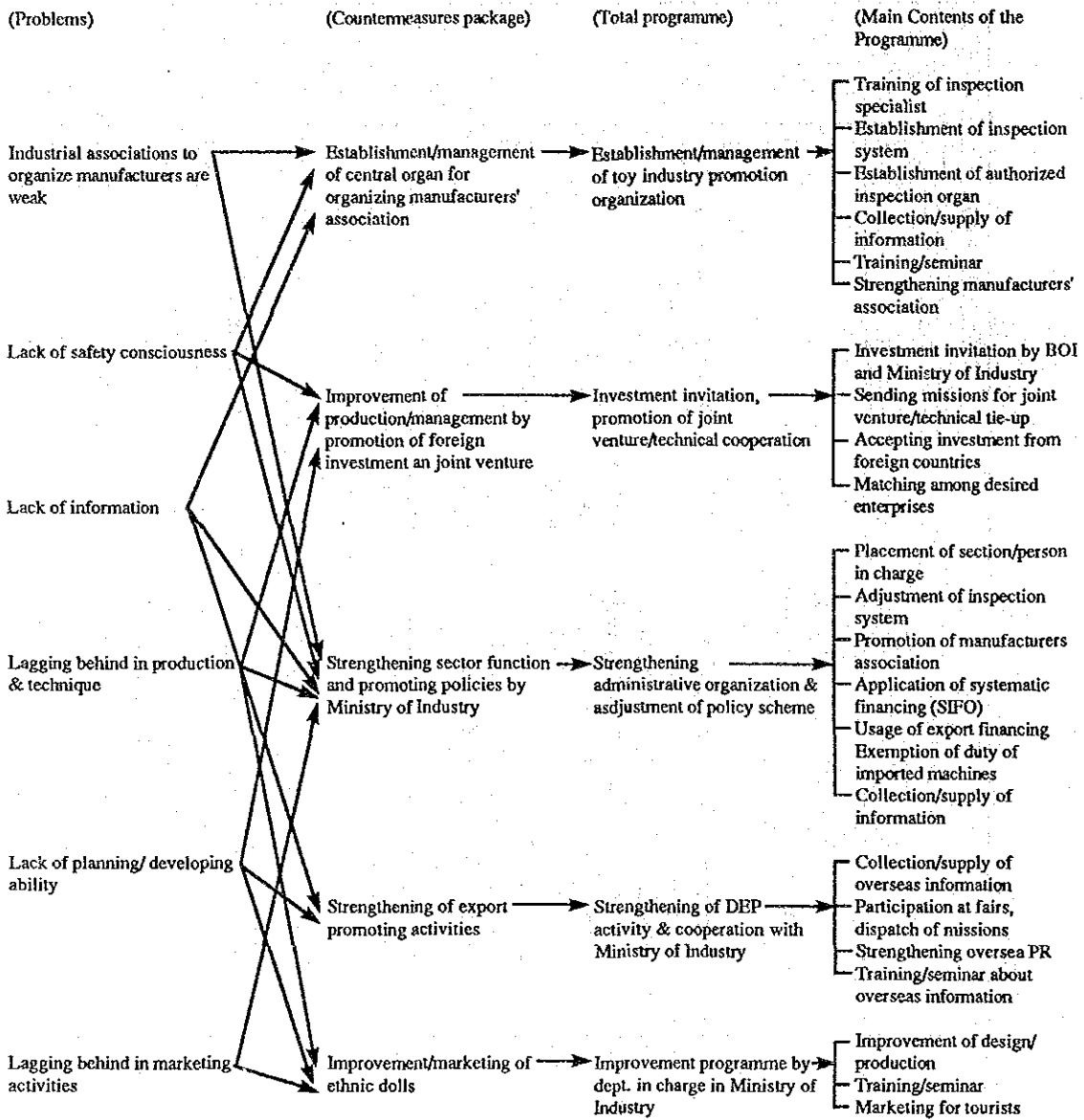
Table IV-7 Programme for Promotion of Toy Industry (2)

COUNTERMEASURE PACKAGE	PROGRAMME	METHOD AND SCHEDULE			
		1st year	2nd year	3rd year	4th year & after
<p>Improvement of production, technique, management and sales ability promoted by investment of foreign enterprises, establishment of joint ventures, technical tie-ups etc.</p> <p>Many toy manufacturers in Japan, Hong Kong, R.O.C etc. are considered to be interested in investments in Thailand and/or technical tie-up with Thai enterprises. Such possibilities will be developed.</p>	<p>Investment invitation, joint ventures, tie-up promotion will be worked out.</p> <ul style="list-style-type: none"> <li>•Missions for invitation of investment &amp; joint ventures organized by BOI, Ministry of Industry and toy manufacturers will be dispatched.</li> <li>•Invitation of toy manufacturers (supporting industries included) by BOI and Ministry of Industry</li> <li>•Mission for investment &amp; tie-up from Japan will be dispatched.</li> <li>•Joint ventures matching among enterprises.</li> </ul>	○	○	○	○
<p>Sector function of Ministry of Industry and cooperation with the related organs will be strengthened.</p> <p>Section and person in charge as a promoter will be made clear in order to grow the toy industry as the exporting industry.</p> <p>Planning and materialization of the promotion policies are required to be proceeded in communication cooperation with the related government organs and toy association.</p>	<p>Strengthening of administrative organization and adjustment of policy scheme for promoting toy industry.</p> <ul style="list-style-type: none"> <li>•Section/person in charge will be set up in Ministry of Industry. (clearization)</li> <li>•Adjustment of inspection system</li> <li>•Organization of toy association will be supported.</li> <li>•The following preferential treatments will be given to the associated enterprises with toy association.</li> <li>•Application of systematic financing (IFCT, SIFO) to toy industries.</li> <li>•Active usage of export financing (a system of refinancing exports at the central bank) for</li> </ul>	○	○	○	○

Table IV-7 Programme for Promotion of Toy Industry (3)

COUNTERMEASURE PACKAGE	PROGRAMME	METHOD AND SCHEDULE			
		1st year	2nd year	3rd year	4th year & after
<p>Strengthening of export promotion by Ministry of Commerce and cooperation with the Ministry of Industry</p> <p>Ministry of Commerce is desired to expand and to strengthen widely in order to expand export of toys including SMEs.</p> <p>On that occasion, sufficient consideration is required for cooperation/communication with the Ministry of Industry</p>	<p>toy-exporting</p> <ul style="list-style-type: none"> <li>•Duty exemption of the imported machine (injection machine, sewing machine, cutting machine, etc.)</li> </ul> <p>Export promotion of toy by DEP will be strengthened.</p> <ul style="list-style-type: none"> <li>•Collection of oversea market and industry information and supply to toy association will be strengthened. (It will be cooperated also with the a/m toy industry promotion center.)</li> <li>•Participation at fairs and missions for inspection and sales will be increased.</li> <li>•Oversea PR activities about Thai Toy industry will be strengthened.</li> <li>•Study and seminars about oversea marketing affairs etc.</li> </ul>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<p>Design and quality control of ethnic dolls for tourists</p> <p>In the background of foreign tourist's increase, the possibility of market expand is high, if the design and quality of the ethnic dolls are improved and if sales channel is adjusted.</p>	<p>Technical &amp; managerial guidance for improvement of ethnic dolls</p> <ul style="list-style-type: none"> <li>•Training courses for design and quality</li> <li>•Adjustment of organization &amp; sales channels for development of tourist market.</li> </ul>	<p>Supply of material /information</p> <p>DEP activities</p> <p>Invitation of lecturers</p>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Chart IV-4. Total Programme for Promotion of Toy Industry





## Concept of Establishment of Thai Toy Industry Promotion Organization

1. Object
  - (1) To improve the inspection system so as to ensure the quality and safety of products.
  - (2) To improve the level of production technology and dissemination of various production control techniques.
  - (3) To disseminate knowledge and implementation of PR activities on product development, design, safety, marketing, etc. for toys.
  
2. Details of Activities
  - (1) Inspection Activities
    - a. Implementation of entrusted inspections on commission for toy manufacturers
    - b. Implementation of inspections for toy exports. However, this assumes establishment of an export inspection system by Thailand and coverage of toys by such export inspections.
    - c. Establishment and maintenance of Thai toy safety standards acceptable internationally. Further, Implementation of safety inspections based on the standards. However, this assumes the establishment of a safety inspection system by Thailand.
    - d. Dissemination and PR activities on the toy specifications and standards of various countries to the toy industry.
  
  - (2) Technical Guidance
    - a. Guidance on designs aimed at development of safe toys.
    - b. Technical guidance aimed at improvement of product quality. Technical guidance to make Thai toys meet the quality levels acceptable in the international market.
    - c. Guidance in production control techniques to contribute to improvement of productivity and to ensurement of stable quality.
    - d. Guidance visits to toy companies by visits of technical guidance personnel of the organization. Technical consultation activities based on requests from toy companies. However, it will be necessary to train the technical guidance personnel of the organization.

- (3) **Technical Information Library**
  - a. Collection of overseas toy related information and opening of the library for companies. Primarily of technical content. As media, books, videos, etc. will be used.
  - b. Collection of first class overseas products and display of same for companies. Primarily dolls.
  - c. Provision of overseas toy related information in the Thai language.
- (4) **Overseas PR**
  - a. Overseas PR activities on safety, quality, design, and other facets of Thai toys.
  - b. Overseas PR activities on production volumes, quality control capabilities, productivity, and other features of capabilities of Thai toy makers.

3. **Necessary Buildings and Materials**

- (1) **Buildings**
  - a. Office
  - b. Inspection room
  - c. Design room
  - d. Workshop
  - e. Library
- (2) **Main Equipment**
  - a. Inspection equipments
  - b. Workshop equipment such as industrial sewing machines and cutting machines, etc.
  - c. Library equipments

4. **Operating Entity**

This will be established as an independent public organization jointly by the government and the toy industry. However, further study is required on the government involvement, and participation by the toy industry, etc.

5. **Sources of Operating Funds**

- (1) **Revenue from Inspection Fees**
  - a. Entrusted inspection fees
  - b. Export-inspection fees

c. Toy safety examination fees

- The inspection equipment and inspection methods for toys can be used widely for other products as well (in particular household goods, light industrial products, etc.), so it would be possible to increase inspection fee revenues by making use of any excess capabilities.

(2) Technical Guidance Fees

- Technical guidance and consulting will be given to toy makers based on the inspection data.

(3) Membership Fee Revenues

(4) Others

Step-by-Step Program for Establishment of Toy Industry Promotion Organization		
	Government Agencies	Private Industry
First Stage	<ul style="list-style-type: none"> <li>• Clarification of sections and staff in charge of toys in MOI               <ul style="list-style-type: none"> <li>- Sections and staff in charge perform role of promoters for the establishment of a promotional organization and of an inspection system and act as liaison and coordinators among related agencies.</li> </ul> </li> <li>• Invitation of experts in inspection of toys               <ul style="list-style-type: none"> <li>- Cooperation in preparations for inspection system.</li> </ul> </li> <li>• Overseas training of staff to train toy inspectors               <ul style="list-style-type: none"> <li>- Dispatch to overseas inspection institutes one chemical and one mechanical engineer.</li> </ul> </li> <li>• Establishment of preparatory committee for establishment of promotional organization               <ul style="list-style-type: none"> <li>- Use of the above-mentioned section of MOI as administrative offices and launching of committee comprised of related agencies and private industry.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of study group in Toy Association               <ul style="list-style-type: none"> <li>- Summarization of industry opinions and cooperation with government for of a promotional organization and establishment of an inspection system.</li> </ul> </li> <li>• Training and seminars on toy quality, safety, product development, design, etc.               <ul style="list-style-type: none"> <li>- Active use of experts to improve awareness of toy maker (Government to cooperate here too.)</li> </ul> </li> <li>• Participation in committee of left column.</li> </ul>
Second Stage	<ul style="list-style-type: none"> <li>• Preparation of plans for preparatory committee for establishment of promotional organization               <ul style="list-style-type: none"> <li>- Preparation of plans for establishment and operation, of inspection system, inspection organizations, information services, training, etc. (Feasibility studies performed in accordance with need.)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Cooperation to preparation of left column</li> <li>• Continuation of above training and seminars</li> </ul>

	Government Agencies	Private Industry
Second Stage	<ul style="list-style-type: none"> <li>• Cooperation in matters of right column</li> <li>- In particular, effort in PR of privileges able to be used by companies.</li> </ul>	<ul style="list-style-type: none"> <li>• Issuance and distribution of "information journal" on toy industry</li> <li>- Issuance and distribution of "journal" to members of Toy Association.</li> <li>- Stress on raising awareness of quality and safety.</li> </ul>
Third Stage	<ul style="list-style-type: none"> <li>• Establishment of Toy Industry Promotion Organization</li> <li>- Government to provide full cooperation in establishment of inspection system, procurement of equipment, and securing of inspection experts.</li> <li>• Start of inspection activities</li> <li>• Implementation of activities in cooperation with the Association</li> <li>- Training and seminars on quality and safety</li> <li>- Training and seminars on products, design development, etc.</li> <li>- Training and seminars on overseas situation and marketing</li> </ul>	<ul style="list-style-type: none"> <li>• Participation in left and cooperation therewith</li> <li>- Participation of industry representatives in operation of Promotional Organization and sharing of responsibility for same.</li> <li>• Cooperation in matters in left column</li> <li>• Cooperation in matters in left column, with some handled by the Association</li> <li>- Strengthening of organization of industry through the same.</li> </ul>

**Details of Technical and Management Guidance Program  
for Improvement of Ethnic Doll Industry**

**1. Object**

The object is the improvement of quality and design of ethnic dolls of northern region (around Chiangmai) produced and sold for foreign tourists and development of sales channels thereof.

**2. Implementing Organization**

- The Northern Industrial Promotion Center (NIPC, in Chiangmai) of the Department of Industrial Promotion (DIP) will be the central organization, while the related sections of the DIP will provide cooperation.
- If possible, private organizations (such as the Toy Association) will also cooperate in the sense of pushing industrial organization.

**3. Implementing Method**

**(1) Technical and Design Guidance**

- Experts in fabric dolls (foreign producers and designers with established reputations) will be invited to give training in design and technical guidance through actual fabrication for ethnic dolls.
- The first training will be provided over three to four days and then the second and later training and design guidance will be considered to the response, results, etc.
- Note that another proposal would be to have foreign experts prepare model products in advance of this.

**(2) Management and Sales Guidance**

- Management seminars will be held on management of petty industries.
- Along with this, seminars will be held on sales to stores handling souvenirs for tourists (department stores, souvenir shops in airports, hotel shops, etc.)
- It would also be effective to collect foreign superior ethnic dolls and lecture of the methods of their production and sale.
- Studies and guidance on means for exploiting the tourist market will be performed at the NIPC.

### **4-3. Policy and Institutional Approach**

Promotion of the mold and die and the toy industries requires and would be more effective with, in parallel with the comprehensive programs mentioned above, support in government policy and institutions. In this regard, some matters considered important and proposals are given below:

#### **Approach [1]**

##### **"Promotion of Investment and Joint Ventures"**

To expand production in key businesses and to raise the level of technology and management, it is necessary and most important to promote investments by foreign enterprises and joint ventures.

#### **(Proposal)**

##### **Positive Use of BOI Investment Incentives**

To promote investments and joint ventures by foreign companies, including SMEs, in key industries such as molds and dies and toys, these industries should be clearly defined as ones to be promoted and positive promotional activities should be engaged in. For this, the following are considered important:

- Clear definition of key industries (in particular, it is necessary to clearly state the stress on supporting industries)
- Promotion of investment and matching of joint ventures
  - To attract investment and arrange joint ventures in industries dominated by SMEs carefully and effectively, the BOI and Ministry of Industry must cooperate to positively uncover potential companies and introduce them to each other.

#### **Approach [2]**

##### **"Strengthening of Policies and Functions of Ministry of Industry and Organization of Industry"**

The policies and functions of the Ministry of Industry, which has previously stressed technical guidance, should be strengthened. In particular, staff must be established on a sectorial basis and organization of the industry must be pushed in a sector-wise policy.

(Proposal)

**Establishment of Sector-Wise Policies and Functions of Ministry of Industry and Promotion of Industrial Organizations**

- Establishment of sector-wise sections and staff and pushing forward of promotional measures
- Establishment of linkages and systems of cooperation with other ministries and related departments
  - For sector-wise promotion measures, financing, tax, and tariff privileges would be effective. Further, explanations, arguments to, and cooperation with other ministries and departments would be extremely important.
- Establishment of industrial organization and promotion of industry through its use
  - In executing sector-wise promotion measures, it is essential to obtain the cooperation of the private sector through organization of the industry and promotion of industrial organizations. It would be effective for the government to provide specific assistance (not exercise controls) through the industrial organizations.

Approach [3]

**"Strengthening of Small and Medium Enterprise Policy and Establishment of System for Same"**

It is important to recognize the importance of the SMEs and to establish laws and systems for their promotion. At the present time, Thailand is in the process of preparation of the same and it is hoped that they will be realized early.

(Proposal)

**Clarification of Sections of Ministry of Industry in Charge of Small and Medium Enterprises and Establishment of System for Same**

- Establishment of Small and Medium Enterprise Law
  - It is necessary to recognize the importance of SMEs and to establish laws forming the basis of promotional measures.
- Strengthening of funds of SIFO, reinforcement of branch network, and strengthening of PR activities



- The present institutional financing system is insufficient in funding, networks, and staff when seen from the viewpoint of the urgency of promotion of SMEs. Quick expansion is desired. Further, it will be necessary to establish a loan guarantee system (in particular, through participation of the SIFO in the Small Industry Credit Guarantee Financing (SICGF)).
- Strengthening of management guidance for SMEs
  - Increased guidance in general management and accounting and other areas (seminars, training, roving guidance, consulting, etc.) for managers of small businesses would be desirable.

#### Approach [4]

##### "Expansion and Strengthening of Information Service for SMEs "

The SMEs suffer from a severe lack of information. The alleviation of this shortage is an important policy issue. Many of the SMEs lack even basic knowledge and information and this must be urgently dealt with.

#### (Proposal)

##### **Establishment of Information Function for Ministry of Industry and Positive Use of Same**

For the time being, Thailand should strengthen its information supply capabilities for key industries, regional industries, etc. In the future, it should aim at the construction of a comprehensive information service system for SMEs through consolidation and linkage of the same. In the future, establishment of a "Small Business Promotion Center" with such information facilities plus training, consultation, and other functions might be effective.

#### Approach [5]

##### "Linkage and Cooperation Between Ministry of Commerce and Ministry of Industry"

For administrative services and promotion of the development of export industries, it is necessary to strengthen the activities of the DEP and to further promote linkage and cooperation with the Ministry of Industry.

(Proposal)

**Establishment of System for Cooperation Between DEP and DIP**

The linkage and cooperation between export promotion activities of the Department of Export Promotion (DEP) of the Ministry of Commerce and the Department of Industrial Promotion of the Ministry of Industry should be strengthened. Linkage and cooperation are important in the following two regards. It is considered necessary to organize cooperative committees in both areas.

- Collection and supply of overseas information
- Training and seminars for export industries and strengthened activities of the DEP, in particular, market surveys, participation in trade fairs, dispatch of missions, and overseas PR are necessary.

Table IV-8 Policy Countermeasure, Programme for Promotion of Mold & Die and Toy Industry (1)

COUNTERMEASURE PACKAGE	PROGRAMME	METHOD AND SCHEDULE			
		1st year	2nd year	3rd year	4th year & after
<p>Promotion of investment invitation and joint venture</p> <p>Promotion of foreign investment and promotion of joint venture is necessary and most efficient to expand production at stressed industries and to improve technique and management.</p>	<p>Active usage of BOI investment invitation policy</p> <p>The important industries such as mold &amp; die, and toy, will be clearly announced and then, active investment promotion will be worked out in order to invite foreign investment including SMEs and to set up joint ventures.</p> <ul style="list-style-type: none"> <li>•Clearization of important industries (The importance of supporting industry will be clearly stressed)</li> <li>•Investment invitation and joint venture matching will be promoted.</li> </ul>	○	○	○	○
<p>Strengthening of policy function at Ministry of Industry and promotion of industry association</p> <p>Policy function of Ministry of Industry which has stressed on technical guidance will be strengthened.</p> <p>Sectional policy should be promoted by promoting industry organization and establishing sectional assignment</p>	<p>Establishment of sectorial policy function and nurturing industrial association</p> <ul style="list-style-type: none"> <li>•Establishment of section and person in charge by sectors; implementation of promotion policy</li> <li>•Establishment of conjunction and cooperation with other ministries and related section</li> <li>•Establishment of industrial association, and nurturing through it.</li> </ul>	○	○	○	○
<p>Strengthening of SMEs policy and adjustment of system</p> <p>The importance of SMEs will be confirmed.</p>	<p>Section in charge of SMEs at Ministry of Industry will be cleared and the system will be adjusted</p>	○	○	○	○

Table IV-8 Policy Countermeasure, Programme for Promotion of Mold & Die and Toy Industry (2)

COUNTERMEASURE PACKAGE	PROGRAMME	METHOD AND SCHEDULE				
		1st year	2nd year	3rd year	4th year & after	
<p>The urgent matter is to adjust a law and system which could be a base of promotion policy.</p> <p>Expansion/strengthening of material/information service for SMEs. Lack of information at SMEs is serious. The overcome is the important policy assignment.</p> <p>Conjunction/Cooperation between Ministry of Commerce and Industry. It's indispensable for administrative service and promotion policy on export industry development to conjunct/cooperate with Ministry of Industry as well as strengthening the activities of DEP.</p>	<ul style="list-style-type: none"> <li>•Settlement of a law for SMEs.</li> <li>•Enlargement and active use of systematic finance for SMEs(IFCT, SIFO).</li> <li>•Fund capacity of SIFO, branch office net work and PR activity will be strengthened.</li> <li>•Managerial guidance for SMEs will be strengthened.</li> </ul> <p>Adjustment of material/information function at Ministry of Industry and its active use. Material/Information function will be strengthened on the important industries and regional industry etc. for the time being. In future it aims at total information service for SMEs using conjunction. In this relation "Promotion Center for SMEs" which has not only material/information function but also training/consultation function etc. might be efficient in future.</p> <p>Conjunction/Cooperation between DEP in Ministry of Commerce and DIP in Ministry of Industry will be strengthened. •Collection and supply of oversea information •Study and seminar for export industry will be held</p>	<p>Invitation of expert</p> <p>Invitation of expert</p> <p>Material &amp; Information</p> <p>Supply of material &amp; Information Invitation of lecturers</p>	○	○	○	○

Table IV-8 Policy Countermeasure, Programme for Promotion of Mold & Die and Toy Industry (3)

COUNTERMEASURE PACKAGE	PROGRAMME	METHOD AND SCHEDULE			
		1st year	2nd year	3rd year	4th year & after
	<ul style="list-style-type: none"> <li>•DEP activity will be strengthened (market research, participation at fairs, dispatch of missions oversea PR.)</li> </ul>	○	○	○	

## Proposals on Policy Approaches in Financing

### 1. Object

The object is to promote new investment and investment in modernization of facilities by SMIs and thereby promote export-oriented small businesses (toy industry) and export-related supporting industries (mold and die industry) and, further, to contribute to strengthening the constitution of the industry and strengthening its international competitiveness.

### 2. Approaches in Institutional Financing

- 1) Expansion of funds for the following institutional financing for SMIs, securement of low interest funds, streamlining of procedures:
  - a) IFCT: Small Scale Industries Finance Facility
  - b) IFCT: Export Industry Modernization Program (EIMP)
  - c) IFCT: Small Industry Credit Guarantee Fund (SICGF)
  - d) MOI: Small Industry Finance Office (SIFO) financing scheme
- 2) Creation of SIFO special low interest loan scheme and application of same to mold and die and to toy industries.
- 3) Application of credit supplementation system (SICGF scheme) to the direct loans of SIFO.
- 4) Expansion of branch network of SIFO
- 5) Expansion and training of SIFO staff
- 6) Strengthening of PR activities of SIFO
- 7) Reinforcement of management consultation function of SIFO

### 3. Proposals for Promoting Approaches in Institutional Financing

- Experts being invited for expanding and improving the institutional financing for SMIs would be better to stay more 2 to 3 years.
- For creation of the special low interest loan scheme of the SIFO, "policy loans" based on advice from experts are going to be created. However, the current draft of the scheme does not include molds and dies or metal toys among the industries eligible for the financing. It would be desirable for them to be included.
- The credit supplementation system (SICGF scheme) has not been used for the direct loans of SIFO up until now since the SIFO is not an investor in

the SICGF. Special measures should be taken to devise means for use of this for the direct loans of SIFO.

- Regarding the increase and training of the staff of the SIFO, experts should be invited (short-term invitation of about six months, one person) and trainees dispatched overseas (short-term dispatch of about six months) for training in banking business such as project evaluation and evaluation of collateral.
- For strengthening the management consultation capabilities, experts in management of SMIs should be added to the staff of SIFO or such staff should be trained. To train experts from the existing staff, it would probably be necessary to bring in one outside experts for a long period of about three years or dispatch trainees overseas for about one year.

4. Approaches and Proposals in Export Financing

- 1) Regarding the export refinancing system of the Bank of Thailand, special measures should be devised such as the expansion of the limit of credit for toys and the establishment of special preferential interest rates. If it is difficult to set special preferential interest rates for special items, consideration should be given to floating interest rates wherein the refinancing interest rates of the commercial banks and the refinancing interest rates of the Bank of Thailand slide along with trends in the interest rates of the city banks.
- 2) An export credit guarantee system should be newly established for small and medium sized exporters.
- 3) Regarding improvement of the export financing system, there are at present no programs underway including invitation of experts etc. The Ministry of Finance, which is in charge, should consider such programs as bringing in of outside experts.

#### **4-4. Review of the Priority Ranking of the Proposed Programs**

It is necessary to give a rough priority ranking to each proposed program in order to implement the programs under the very tight limitations on both funds and human resources, etc.

A priority ranking of the proposed comprehensive programs for the mold & die and toy industries is provided in the order as shown in the table.

Because all the programs proposed in this study were not identified through sufficient feasibility studies, a priority ranking of each could not be given using very strict criteria such as figures of the IRR (international rate of return) of each program.

As a second basic approach, a priority ranking of each program was given by the rather subjective judgement of the study team according to the following criteria:

- (1) Existence of established organizations in charge of the program
- (2) Maturity level of the program
- (3) Urgency of the needs of the program
- (4) Scale of investment of the program
- (5) Level of direct impact of the program on the development of the targeted industry
- (6) Necessity of external supports such as international organizations.

Finally, separate from the program's priority ranking, it should be emphasized that for putting the program into practice, the establishment of the section and authorities in charge of the relevant sector in the Ministry of Industry and the establishment of its function as policy planning and practical realization of the program in particular is essential. The section and authorities in charge will become the core for concrete planning of policies concerning the relevant industries and will fill a role as promoters of the program's practical realization (See Chart IV-5). If this body is not established, realization of the program is likely to be extremely difficult.



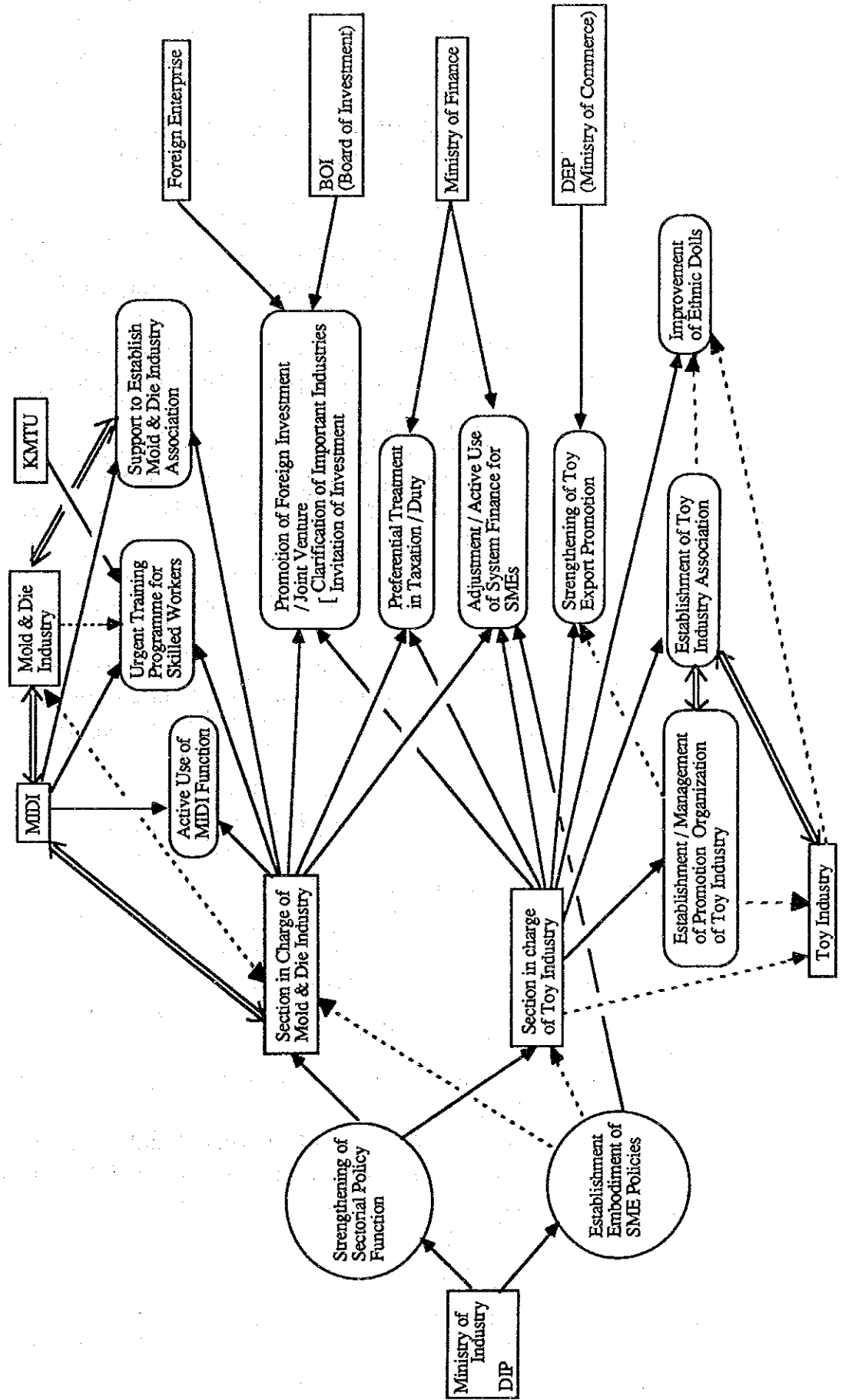
Table IV-9. Summary of the Results of Review of Program Priority Ranking (Mold & Die)

	Active use of MIDI	Establishment & active use of the Industry Association	Promotion of establishment of joint venture	Enforcement of urgent training programme for mold worker	Preparation of policy scheme for Mold & Die Industry development	Enlargement of engineering education at university / high school level
1. Existence of established organizations in charge	Yes	None (Under consideration)	Already investment by mold&die manufacturer	Yes (Ranking at KMIT by WestGermany)	None	Yes
2. Maturity level of the program	High (Support for present situation)	Medium	High	Low	Low	Medium
3. Urgency of the needs of the program	High	High	High	High	Medium	Medium
4. Scale of investment	Small	Small	Large (If industrial estate is established)	Medium	Small	Medium
5. Level of direct impact	Medium	Medium	Large	Medium	Large	Medium
6. Necessity of external support	Large	Medium	Large	Large	Small	Large
7. Priority	1	2	3	4	5	6

Table IV-10. Summary of the Results of Review of Program Priority Ranking (Toy)

	Establishment and management of Toy Industry Promotion Organization	Development of promotion activity for joint venture and cooperation	Strengthening of administrative organization and preparation of policy scheme for development of toy industry	Strengthening of promotional activity by DEP	Technical & managerial guidances for improvement of ethnic dolls
1. Existence of established organization in charge	None	Already investmet by Toy Manufacturer	None	Yes	None
2. Maturity level of the program	High	High	Low	Medium	Low
3. Urgency of the needs of the program	High	High	Medium	Medium	Medium
4. Level of direct investment	Large (incl. buildings)	Large	Small	Small	Small
5. Scale of direct impact	Lage	Large	Medium	Medium	Medium
6. Mecessity of external support	Large	Large	Medium	Medium	Medium
7. Priority	1	2	3	4	5

Chart IV-5. Action Taken by Ministry of Industry Concerning Enforcement of Comprehensive Programme



**Work of the Sections and Authorities in Charge of Each Industry**  
(Example from Ministry of International Trade and Industry in Japan)

<Extent of Basic Work>

Planning for promotion, improvement, and adjustment of production, distribution, consumption, export, and import for industries of which the section is in charge.

<Example of Manufactured Products and Industries of Which the Section is in Charge>

Cast and Wrought Products Division, Machinery and Information Industries  
Bureau

Cast and forged products, iron manufacturing machines, welding machines, forging machines, molds and dies, rollers, industrial furnaces, bulbs, manufacturing tools, iron pipes and joints, files, powder metallurgy, metal patterns, and heat treatment.

Recreation and Miscellaneous Goods Division, Consumer Goods Industries  
Bureau

Sports equipment, stationery goods, musical instruments, records, personal accessories, umbrellas, leather, leather products, tannin, glue, gelatin, footwear, briefcases, bags, packaging material, packaging.

<Extent of Authority and Responsibility (Standard Example)>

- Creation of plans and writing drafts on basic measures concerning production of goods, distribution, consumption, and trade in the field of which the section is in charge.
- Promotion of technology in the field.
- Establishment of industrial standards in the field.
- Promotion of import and export in the field.
- Promotion of the necessary measures relating to international agreements or transactions connected with trade in the field.
- Approval and supervision of the agreements and pacts between industrial groups and associations in the field.
- Establishment of inspection standards for goods of which the section is in charge, appointment of an authorized inspection agency, and supervision of its operation.

## **APPENDIX**



## **APPENDIX: I. MOLD & DIE**





Appendix: I. Mold & Die

Mold & Die for Press <Large> (1)

( ) : the number of employee who engages in metal mold.

1. Summary Table of the Firms Interviewed

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
National Thai Co. Ltd.	light electric appliances (color TV, battery etc.)	1, 500	milling machine copy milling machine EDM W.C. EDM lathe	5 1 2 1 1	Joint venture with Matsushita (49%) Basic product plans drawn in Japan, mold plans in Thailand. Some external mold orders, too.
Toshiba	home electric appliances (refrigerator, electric fan, TV, rice cooker, motor)	1, 200 (34)	milling machine drilling machine others	1 2	Joint venture with Toshiba (49%) Metal mold plans drawn by themselves. Also external mold orders to 5-6 manufacturers.
Thai Hoover Industry	cases for cosmetics	540 (Technician 30)	—	Only for self-use	Also mold for plastic. They cover their mold - needs by themselves. Can copy, but can't apply. (cf) Metal mold for plastic <large>
Hengcharon Loha KIJ	home electric appliances & metal - mold for press	200	CAD EDM W.C. EDM	1 1 6 others	Chinese Family partnership. Draws metal mold plans acc. to samples. Produces molds by mold plans.
CH Autoparts	Automobil parts & metal mold for press (body, fuel tank radiator, bicycle motorbike)	240 (80)	horizontal copy milling machine	8	Has a designing groups of metal- mold (ca.20) which includes CAD designing. Almost complete as non-mainstream automobile - parts factory.
Thai Hino Industry Co.	Truck & metal mold for sheet metal mold	250 (67)	copy shaper 1500ton-press setting machine	3 1 2	All management in Japanese style. Entrusts E.K. Siam & KSK Autoparts only with machinery processing.
Sammitr Motor Manufacturing	Automobile parts, car body accessory & metal mold	300 (Technician 15)	copy shaper	some	Technicians get training at Toyota Jiko (Nagoya)

Mold & Die for Press <Large> (2)

( ) : the number of employee who engages in metal mold.

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Ooh Alai Parts Center	Motorbike parts	200 (10)	milling machine, 10 lathe etc. copy milling machine 1 others	Only for self-use	70% of the required mold is covered by external orders. Besides, makes metal mold for plastic & die casting. (cf) Metal mold for plastics <large>
Siam Kubota Diesel	small engine	160-190	_____	_____	Joint venture of Siam Cement (41%), Kubota 30%, IMCT 10%, Marubeni 10% & others 10% President is Japanese. Middlelevel mold technique. Mold & press processing is covered by external orders.
Isuzu Motors Co.	Automobile	710 (40)	_____	_____	Basic product plan & mold plan are designed in Japan. Adjustment/modification is done by themselves.
Siam Yamada Co.	Motorbike	1,300 (20)	milling machine 2 lathe 3	_____	100% Thai capital (Siam Motors 70%, personal 30%) All metal molds are entrusted to 4 press makers and 5 plastic ones. Modification/repairment is done in their repair shop.
Toyota Thailand	Automobile	1,212 (20)	milling machine 1 copy milling machine 1 lathe 1	Only for self-use	Joint venture of Toyota (65%) & Thailand (35%) Their mold production covers only partly. Most of the part is ordered externally to Hino, CR Autoparts and Summitr.

Mold & Die for Press <Middle> (1)

( ) : the number of employee who engages in metal mold.

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Anestrom Co. (Toolttech Co.)	Precise mold for IC parts Mold for automobile parts	30	—	Had exported directly/ indirectly	Provides QC training at partners Ambitious for technical improvement Some mass productive parts are covered by external orders.
Kyodo Diework	Extrusion mold & press metal mold for aluminum sash	(planned) 95 (7.0)	EDM W.C. EDM milling machine machining center	3 3 7 1 others	Joint venture of Institute of Electric - discharging processing (50%), Toyo Sash (20%) and TOSTEM (30%) BOI promoted venture (Firstly approved) TOSTEM (Toyo Sash affiliated company in Thailand) is in charge of designing for product/metal mold.
Siam Xiki Co.	Car air condition	127 (6-7)	milling machine lathe drilling machine others	—	Joint venture of Siam Motor (70%) & Diesel Xiki (30%) Mold is basically entrusted to the makers using product plan & sample. Only maintenance is done by themselves.
Inter Tools	Metal mold parts (press / diesel parts, injection mold base etc)	42	lathe milling machine machining center others	Japanese automobile and home electric appliance makers	Some external orders. Planned to transfer to Bang Plee Industrial Estate after combining the present 4 factories.
Nihon Denso Tool and Die	Automobile electronics & mold	43 (planned to hire new 30 in this year)	—	Domestic 20% Export 80% Nihon Denso Group only; mainly to Japan, partly to Malaysia, S'pore and Australia	BOI applied. Japanese management style. Even workers are trained for 4 months in Japan.
Micron Max Co.	Mold parts for IC	63	EDM milling machine lathe grinder	—	Mainly processing interested in joint venture with foreign enterprise.
President Auto Part	Automobile / Motoebike parts	60-70 (8)	85t straight side machining center	Only for self-use	Designs mold plan acc. to product plan. Simplified style only.
Lard Kra Bang Steel Co.	Press parts for agricultural machine steel sheet	30- (5-6)	—	—	Has business relationship with Matsusaka Mold. Planned to start production of highly precise mold for plastics in the future.

**Mold & Die for Press <Middle> (2)** ( ) : the number of employee who engages in metal mold.

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
B.T. Engineering	Automobile / motorbike parts	100 (10)	press machine EDM milling machine lathe	only for self-use 90% External Sales 10%	Draws mold plan using of sample/product plan (4 plan designers)
Nissan Diesel	Automobile (Large truck)	56	---	---	Joint venture of Marubeni (30%), Nissan Diesel (30%) & Siam Motor (40%) Metal Mold is both imported from Japan and entrusted to Summit Motor. Japan-made product/mold plans are submitted for external order. Tendency for establishment of metal mold factory as result of high application of yen.

Mold & Die for Press <Small>

( ) : the number of employee who engages in metal mold.

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Seng Kaeslak	Partial processing (subcontractor)	10	EDM W.C.EDM	9 Subcontracting production from metal mold industries 1	Ambitious as specialized factory. NC Programmer is being trained under Taiwanese government's aid. Plan design is provided by the customer.
Choakcai Karncang	Press metal mold	5	lathe	2 mainly Sanyo	Dependent on President's technique and experience Produces single press mold in expensively.
Sumran Vocational	Metal mold for home electric appliance	20	EDM milling machine lathe	1 Thai enterprises 1 Japanese enterprises 1 enterprises	70% Produce mold directly from the sample (without mold plan) 30% Intends to enlarge the business.

Mold & Die for Plastics <Large>

( ) : the number of employee who engages in metal mold

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Thai Hoover Industry	Cases for cosmetics	540 (Technician 30)	_____	Only for self-use	Also press mold. Covers their mold-needs by themselves. Can copy, but can not apply (cf) press metal mold <large>
Ooh Alai Parts Center	Motorbike parts	200 (10)	milling machine, 10 lathe etc. copy milling machine 1 others	Only for self-use	70% of the needed meta-mold is covered by external orders. Besides, makes metal-mold for prastic & die casting. (cf) press metal mold <large>
Krungtep Union	Home electric appliance	150	machining center u.k. W.C.EDM u.k. EDM u.k. (Being equipped)	_____	President is Japanese. Has relationship with Union Itoh.
Narong Industry	Motorbike parts & mold	496 (61)	milling machine 9 copy milling machine 2 EDM 2 lathe 4	only for self-use Partly for external sales (export inceased)	The first Thai enterprise which has all digital vertical milling machines. Has 2 factories (production, repair)
Sanyo Universal	Home electric appliance	2,000 (20-25)	_____	Only for self-use	Only comparatively simple molds are designed/produced by technician trained by OJT. (30-40% of the needs) Other than the above is entrusted to neighborhood of the factory. Difficult one is designed in Japan. 80% of press mold is produced by themselves.

Mold & Die for Plastics <Middle>

( ) : the number of employee who engages in metal mold

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Srichai Superware	Toy, motorbike/ automobile parts, daily home products	50 (all mold staff)	milling machine copy milling machine EDM drilling machine others	mainly for self-use	Designing is weak. A possibility to of joint venture with foreign investment / technical tie-up.
K.S. Eaterprise	Textile, Motorbike parts (textile 60-80%)	90 (15)	milling machine lathe EDM drilling machine	self-use 60-70% external sales 30%	Makes mold from product sample. Can not design mold plans, but can read it
Union Itoh	Mold for light electric appliance / automobile	50	EDM W.C.EDM M.C. copy milling machine		Became independent of the mold Dept. of Union PL Chief of the mold Sect. is trained in Japan.
Tiasenboon Ltd.	Plastic injection for decoration & H.K. flowers	77 (10)	EDM milling machine graving machine	Only for self-use	Produces mold by simple product plan only (without mold plan) Also uses 7-8 metal mold subcontractors
Thai Poly Plastic	Bobbin, toy (50:50)	33 (4)	lathe milling machine	Only for self-use	Produces mold from sample Beginner's technical level only. (cf) Plastic Toy <small>
Lin Industry	molds for motorbike/ home electric appliance	ca. 30	lathe milling machine EDM drilling machine	Japanese enterprises	Draws mold plan by themselves acc. to customer's product plan. Injection mold 65% Die casting 30% blow mold 5%
Sahasilp	Home electric appliance parts	89	lathe milling machine drilling machine	Only for self-use	Has 2 factories. Technical introduction from Korea & Japan.
Laha charoen	metal mold (30%) Crusher (70%)	—	lathe milling machine drilling machine	—	Can't draw product / mold plan. Produces mold by product plan or sample.

Mold & Die for Plastics <Small>

( ) : the number of employee who engages in metal mold

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Saha Karn Chang	metal molds for plastic	10	EDM NC	not clear (Had business with Japanese enterprises)	Famous as EDM-factory. Designing is all OFD. President's one-man management based on his experience. Seems to be a leading company in Thailand
Sukit Karnchang	metal mold for plastic	8	EDM lathe	Order-receipt-production by words of mouth (Hitachi, Sharp etc.)	Family partnership. Negative to business enlargement. Empirical.
Anuphap	metal mold for plastic injection mold 80% graving mold 20% others 20%	12	lathe milling machine graving machine	Nuk's subcontractor Order-receipt-production	Produces mold by product plan (without mold plan) President's empirical management
Peig karnchang	metal mold for plastic	17	milling machine lathe EDM drilling machine others	---	Can't draw product/mold plan by themselves. Some external orders also.



## Question Sheet (Molds and Dies)

Date: \_\_\_\_\_

Interviewer: \_\_\_\_\_

Name of company: \_\_\_\_\_

Interviewee: \_\_\_\_\_

### 1. General

- (1) Years since establishment:
- (2) Capital:
- (3) Major shareholders:
- (4) Main items:
- (5) Existence of management organization (or sharing of management):
  
- (6) Personal history of president:

### 2. Workforce

- (1) Number of employees and classification by job:
- (2) Job-hopping:    • frequent      • unfrequent  
(Average years of work:    )
- (3) What kinds of method do you use to reduce job hopping?:
  
- (4) Recruitment of employees:    • difficult      • easy  
If difficult, specify the reasons:
- (5) Wages:
- (6) Peak time of operation and ways of recruiting workforce:

### 3. Sales

- (1) Yearly sales value:
- (2) Yearly sales volume:
- (3) Change over previous years: • rise • unchanged • decline, \_\_\_\_ %
- (4) Main customers:
- (5) Required shipment lot and volume:
- (6) Terms of delivery:
- (7) Terms of payment:
- (8) Specific demands from customers:
- (9) Customer satisfaction (in terms of prices): • satisfied • unsatisfied  
If unsatisfied, you want to increase prices by \_\_\_\_ %  
Concrete measures for price increases:
- (10) Are you willing to expand your business?: • Yes • No  
In the case of "Yes":  
1) Specify products of which sales you want to expand:  
2) Do you have any plans for capital investment to expand business?:  
• Yes • No  
In the case of "No", specify the reasons:
- (11) How do you find your new customers?:
- (12) How do your customers find their suppliers?:
- (13) Increases in your new customers in the past year:
- (14) Have you ever exported your products?: • Yes • No  
In the case of "No", do you want to start exporting your products?:

- Yes
- No

In the case of "Yes", export markets:

(15) Problems (or difficulties) with exporting:

#### 4. Financing and Accounting

(1) Do you keep books?:  Yes  No

In the case of "Yes", who is responsible for book-keeping?:

- employees
- outside company

(2) Do you have cash-flow chart?:  Yes  No

(3) How do you raise money when you purchase new equipment:

(4) Years of amortization for capital investment: \_\_\_\_\_ years

(5) Do you borrow money from banks?:  Yes  No

(6) Terms of borrowing

In the case of borrowing from bank:

Otherwise:

(7) Do you adopt measures to control costs?:  Yes  No

(8) Cost composition (Sales price = 100):

Material costs: \_\_\_\_\_ %

Personal costs: \_\_\_\_\_ %

Other expenses: \_\_\_\_\_ %

Profit margins: \_\_\_\_\_ %

#### 5. Purchasing

(1) Suppliers of materials:

(2) Purchasing terms:

(3) Payment terms:

(4) Problem with purchasing:

## 6. Subcontracting

(1) Do you use subcontractors?:      • Yes      • No

(2) How many subcontractors do you use?:      \_\_\_\_\_ companies

(3) What kinds of job do you subcontract?:

(4) Satisfaction in terms of quality:      • satisfied      • unsatisfied

If unsatisfied, specify the reasons:

(5) Satisfaction in terms of delivery:      • satisfied      • unsatisfied

If unsatisfied, what do you want to demand to subcontractors?:

(6) Do you demand something to your subcontractors ? (including guidance):

• Yes      • No

In the case of "Yes", what do you demand to subcontractors?:

In the case of "No", please specify the reasons:

## 7. Others

(1) How do you get information about your competitors?:

(2) Do you have some contacts with your competitors?:      • Yes      • No

In the case of "Yes", what kinds of contact do you have with your competitors?:

In the case of "No", do you want to have some contacts with them?:

• Yes      • No

In the case of "Yes", what do you want from these contacts?:

(3) How do you gather technical information?:

## 8. Technology and Production

(1) Number of engineers and technicians and their academic career:

(2) Designs (level of design and drawings):

(3) Quality control

Do you implement quality control?:

(4) Production management

Do you introduce some methods for production management?:

(5) Safety control

Do you introduce some measures for safety control?:

(6) Main machines and equipment

Number of machines and their capacity:

(7) Steel materials used

Name of steel manufacturers:

Consumption per month (kg):

(8) Use of subcontractors (heat treatment and sheet processing) and your evaluation about them:

(9) Outline of molds and dies you have ever produced:

(10) New items of molds and dies you want to produce:

(11) Training program (OJT, voluntary training courses, overseas training):

(12) Engineering books you own (five books you use most frequently):

## 2. Plan for Study in Other Countries (Sample)

Industry to be investigated: Mold and die industry

Country to be investigated: Singapore

### Investigation Items and Details

#### 1. Outline of Industry

Based on the results of the investigation as to Item (2.) and subsequent ones, the mold and die industry in Singapore will be outlined in terms of present status, production, marketing, export, import, demand, company management, technologies, product accuracy, mechanical installations, government promotion and encouragement policies, etc. In addition, any matters to be taken into account as well as any problems to be solved in future also will be summarized.

#### 2. Industrial Trend

Based upon the available production (shipment) statistics for the last 10 years, the production trend of the mold and die industry and itemized production trends such as of pressed molds and plastic molds shall be clarified. In addition, the trends of homemade and privately-made metal molds will be analyzed.

Furthermore, concerning the points mentioned below, what problems have been encountered and how they have been overcome will be made clear through interviews with government officials, the people concerned with this industry, leading manufacturers, major users and so on.

- a. Production system
- b. Procurement of raw materials and parts (Is it possible to obtain articles sufficiently able to satisfy user requirements?)
- c. Conditions of processing, finishing and testing machine layout
- d. Actual states of related industries supporting metal mold production such as heat treatment, machining and parts supply
- e. Competitiveness (production cost inter alia)
- f. Composition of production cost
- g. Accuracy of products
- h. Technological level (as viewed from engineering ability, drawing art, skill of mold and die workers, and diffusion of CAD/CAM systems)
- i. Actual states of management systems including production control, process control, etc.

- j. Training system for skilled workers
- k. Ratings given to metal mold producers by users including, for example, manufacturers of motorcars, household electric appliances and plastic goods.

### 3. Export Trend

Based upon itemized export statistics for the last 10 years, the export trends classified by item and destination country shall be made clear. Further, understanding of the following points shall be obtained through interviews with government officials, people concerned with this industry, leading manufacturers, etc.

- a. Motives for take offs to export and the background thereof
- b. Which exports are more generalized, finished or semifinished products or parts?
- c. Competitive or mutually-beneficial relationships in foreign markets (as far as practicable).

### 4. Import Trend

Based upon itemized import statistics for the last 10 years, the import trends classified by item and by country of origin shall be made clear. Understanding of the following points shall be obtained through interviews with government officials, people concerned with this industry, etc.

- a. Characteristic changes in general over the past decade
- b. Import trends by import item and also country of origin.

### 5. Demand Trend

On the basis of production and trade statistics for the said period, the demand trend as classified item by item shall be clarified. In addition, the following factors shall be understood by interviewing government officials and people concerned with this industry.

- a. Demand trends for metal molds as classified by industry
- b. Competitive or mutually-beneficial relationships between domestically-produced and imported molds and dies
- c. Trend of investment in the machinery and facilities that are highly correlated with the demand for metal molds.

### 6. Policies for Industrial Development and Export Promotion

The kinds of policies that have been adopted and the kinds of institutions that have been established by the government toward overcoming the difficulties mentioned in Item

(2.) above shall be made clear through interviews with government officials, and people and enterprises concerned with this industry. The results obtained will be synthesized for the purpose of reporting. Further, the kinds of preferential measures, especially in the way of financing, taxation and custom imposition, that have been taken, and whether or not any officially established training centers for engineering and technical workers are available shall be clarified. If available, the functional features, training methods, etc., of such centers shall be outlined likewise.

#### 7. Case Studies of Enterprises

Case studies for 5 to 10 leading manufacturers shall be carried out in terms of the following aspects.

- a. History of company
- b. Main lines of products and export products
- c. Procurement conditions of raw materials
- d. Conditions of machinery layout
- e. Educational careers and competency levels of designers and draftsmen
- f. Methods of technology transfer
- g. Extent of actual utilization of government assistance or promotion policies
- h. Management strategy
- i. How customers are won
- j. Affiliations with foreign companies
- k. Characters of executives.



### 3. Success Story of Joint-Venture in Mold and Die Industry

#### 1. Company Name:

Union Itoh Molds Co., Ltd.

#### 2. Outline of Co:

##### Location:

Bangchan Industrial Estate, Sukapiban 2, Minburi, Bangkok, Thailand,  
Tel: 5170109

##### Representative:

Mr. Paotep Chotinuchit, President

##### Founded:

Company established June, 1987, operations commenced April, 1988  
(approved by the BOI in September, 1987)

##### Operations:

Manufacture and sale of plastic precision molds for use in TV cabinets,  
everyday sundry goods, and parts for general home appliances,  
automobiles and motorcycles

Export ratio of 50% in line with BOI authorization criteria

Destination of most products in Thailand is Union Plastic Co, its Thai  
associate company, and most of the exports are expected to be sent to  
Japan

##### Capital:

60 million Baht

##### Capital Structure:

Thailand- Saha Union Co. (65%)

Japan- Ko Co. (plastic molding co.) 33%, Ky Co. (trading co.) 2%

##### Associated Companies:

Thailand- Union Plastic Co. which is affiliated to Saha Union

Japan- I Company run by the president of Ko Company (8 employees and  
capitalized at ¥3.0 million)

##### Number of Employees:

55 (independent from Union Plastic's mold and die division)

Other, 2 Japanese technicians from I Company permanently stationed at the  
company

##### Scale of Factory:

Floor area- approximately 1,800 sq meters

The main equipment at the factory includes about 30 pieces of machinery (vertical milling machines, profile milling machines, EDMs, etc.) which belonged to Union Plastic's mold and die division and which were transferred to the company after reassessment. In addition, one profile milling machine, surface grinder, tool grinding machine, EDM, W/C EDM, and machining center were brought in from Japan, making the company one of the best in Thailand in terms of the range of equipment installed.

Also, the new factory has been built on Union Plastic's site and it is located in close proximity to most of the company's customers.

### 3. History of the Joint Venture

Ko Company, which has its head office in Tokyo and carries a work force of 115 and is capitalized at ¥23.40 million, is a manufacturer of plastic injection molding products. I Company is a holding company of Ko Company and acts as Ko Company's mold and die manufacturing division. It is a mold and die manufacturing company which is capitalized at ¥3.0 million, carries a staff of 8, and possesses 2 EDMs, 3 lathes and 5 other processing machines.

Saha Union, the Thai party to the partnership, is a company which manufactures and sells textile goods, accessories, zippers and buttons, etc. It is capitalized at 1.0 billion bahts, has a work force of 673 and is a large Thai financial combine. Affiliated to it are the 20 companies belonging to the Saha Union Group which employ a combined work force of more than 10,000.

Starting with the formation of a joint venture with the Japanese company Yoshida Industries (Co.,Ltd.) in 1961, Saha Union has operated a number of joint venture enterprises with top ranking Japanese companies.

Union Plastic is a medium-sized company affiliated to Saha Union and is capitalized at 40.0 million baht. It carries out the production of various types of injection molding products such as parts for home appliances and everyday sundry goods.

Ko Company's link with Thailand goes back about 10 years when it decided to switch over to Thailand rather than the NIEs in connection with the purchase of agricultural products. Although the venture itself did not turn out to be successful, the knowledge concerning Thai culture, customs and ways of thinking and the human contacts, including Japanese resident in Thailand, that were gained in the process have formed the basis of this current joint venture.

The first substantial dealings with Thailand began in 1981 when T Company, a Japanese company established in Thailand, asked Ko Company for assistance in relation

to plastic extrusion molding. This connection subsequently led to the start of relations between Ko Company and Union Plastic with the result that Ko Company provided the following forms of assistance to Union Plastic:

- [1] Technical guidance concerning plastic molding
- [2] Advice on the selection and purchase of molding machines and machine tools
- [3] Technical guidance concerning the design of molds and dies
- [4] Supply of mold and die parts which cannot be manufactured in Thailand
- [5] Training in Japan of mold and die technicians belonging to Union Plastic.

In addition to the above five forms of assistance Ko Company has consigned molding and assembly of plastic sundry goods to Union Plastic since 1986. This is achieved by having Union Plastic manufacture the molds and dies for the main parts of plastic goods and by bringing molding parts which require a high level of precision from Japan. Also started at about this time was technical guidance related to test and inspection of molded goods.

Stemming from the trusting relationship which has been formed as a result of this sort of contact between Ko Company and the Thai side and the high level of understanding on the Thai side of Ko company's mold and die design and manufacturing technology, Saha Union, the parent company of Union Plastic, put forward the proposal for the establishment of a new company which would be a joint venture between Japan and Thailand with the objective of manufacturing molds and dies.

#### 4. Motives Behind the Joint Venture and Production Planning

The primary motive for the establishment of the joint venture company was the proposal made by Saha Union, in which there was absolute trust. The deep trusting relationship which had been built and maintained between Ko Company, I Company and Union Plastic over many years in regard to both technological and business-related aspects is thought to have been behind the decision.

Ko Company had early on predicted the changes to the Japanese industrial structure and the accompanying decrease in manufacturing production within Japan, and in relation to this had noted the favorable conditions in Thailand which, it thought, though not yet a rapidly industrializing country like the NIEs, was bound to become a NIE.

The company was aware of the favorable conditions inside and outside Thailand such as the rising demand for molds and dies for plastic molding goods in Thailand and its neighboring countries and also moves by advanced countries to start importing molds and dies from developing countries. Therefore, the company decided to make its own move in response to these developments. In addition to this, Ko Company came to other

conclusions. These included: the strong belief that basic to mold and die manufacture were the quality of molding products and productivity; the expected increase in appreciation of Union Plastic as a plastic molding goods manufacturer in Thailand if delivery were shortened and precision levels increased in the new company; and that it would be possible for Ko Company as well to undertake the horizontal division of labor for plastic manufactures and mold production which would enable the company's activities to internationalize more quickly and easily.

It is a fact that the company happened to have considerable knowledge of Thailand from some time ago that made it easy for the company to recognize such points and to make its decisions.

This joint venture enterprise was established on the basis of contacts maintained over many years and a detailed preliminary survey. Despite the fact that the new company required a considerable amount of investment in plant and equipment, a statement from the Japanese side about the venture is to the effect that the decision was made partly for fun. Included in this statement, which can be viewed somewhat paradoxically, there is the sense that, resulting from past circumstances, there is much confidence in future expectations of the Thai industrial sector and the development of new ventures.

In relation to plans for joint ventures between Japan and Thailand, if one takes into consideration the national traits of both Thailand and Japan, the ease with which both sides can relate to each other is of particular importance.

Though some time has passed since the new company was established and the stage has not yet been reached where a report can be made on the performance, as far as plans are concerned, on the basis of the production value of the molds the new company manufactures, 50% is to go to Union Plastic and 25% to be exported to Ko Company and a similar amount to other overseas companies. There are plans to go into full production during the fourth year of operation. 70% of the molds for Union Plastic are for use in making television cabinets and other home appliances and the remaining 30% is comprised of molds for motorcycle parts and everyday sundry goods. As for the molds produced for export, including those to Ko Company, operations are now being planned on the basis of 50% are for everyday sundry goods, 20% for parts for home appliances, and the remaining 30% for others.

##### 5. Matters to be Considered When Forming Joint Ventures

As has already been mentioned, this joint venture has been formed on the basis of a long and trusting relationship between the parties directly concerned. In order to form successful joint ventures with overseas companies it is necessary to make estimates and pay close attention to the various detailed points involved in the process from the time of

the preparatory stage for establishment up through to the actual founding of the company. The points which Japanese companies pay particular attention to when forming new companies are listed below:

- **Joint Venture Contract**

Proceeding towards joint ventures by only the parties concerned was avoided, and instead assistance was sought from the very beginning from Japanese consultants and JETRO as a safeguard to ensure that everything would proceed smoothly. The assistance covered detailed matters relating to Thai business strategies and Thai law. An exhaustive survey of cases in which Japanese companies proved unsuccessful or pulled out from their operations in Thailand was undertaken and points of attention from the survey were paid down to the finer details of the planning of equipment, production and management and the joint venture contract.

In regard to the contract, emphasis was placed on the management of the new company rather than on technical-related matters. Thorough debate was carried out on the initial arrangements which were very important, and specific reference was made to all details.

- **Personnel and Labor**

Stemming from the perception that the management of Thais was best carried out by Thais themselves, all matters relating to personnel and the rights of employees were left up to the Thai side. This was based on the belief that because the nature of mold and die manufacture is one which is based on the management of people, all matters requiring decisions should be resolved by the Thai employees in charge so as to manage affairs without hurting the pride of the Thais.

- **Business**

Due to the fact that the items are precision molds for plastic goods business activities is carried out with an understanding of technology. Also, because Japanese companies themselves, which make up a substantial portion of demand for precision molds and dies, have been setting up operations in Thailand in rapidly increasing numbers there is a strong need to develop customers among Japanese companies situated in Thailand and in neighboring countries. Due to this aspect the initiative to deal with matters relating to business should lie with the Japanese side.

- Accounting

Because in the meantime most of the company's administration, including accounting, is being carried out by Union Plastic staff, the Japanese side has obtained the right to take an active part in matters relating to accounting. This was done out of necessity because of the relative weakness of Thai companies in the area of the administration of accounts and calculations, and has made it possible to carry out thorough checks on costs. This step has also been taken in order to prevent loose administration or confusion in accounting with slips belonging to Union Plastic.

To this end, a Thai who is proficient in Japanese and Chinese and who has studied at a Japanese university to post-graduate level has been employed by Ko Company. This has made it possible to check closely and analyse the various types of account ledgers which are written in the Thai language and which have been compiled by staff at Union Plastic.

- Schedules and Actual Management

In general, the type of production management systems which are carried out in Japan are not used widely within the Thai mold and die industry. In order to set production targets at an early stage, importance has been placed on the systematization and simplification of Ko Company's know how relating to the production management of molds and dies so as to fit in with the Thai way of doing things. This has been achieved by starting with making schedules for processing times, carrying out a survey and analysing its findings, and making efforts to accumulate data related to management. The roles played by the Thai staff members are of great importance in carrying out and analysing this survey and in defining the positions of the Thai employees.

The establishment of this joint venture was achieved under favorable conditions. However, there is no doubt that the process required for creating such favorable conditions involved making efforts to learn about each other's countries over a considerable period of time, to understand people, and to deal with each other with respect and sincerity. In addition to the trusting relationship between the two sides the assistance of a third party has also been relied upon. It is the objective and also close scrutiny of detail and the making of judgements which hold the key to the success of joint ventures such as this. Much can be expected of the Union Itoh Molds company in the future.

## **APPENDIX: II. TOY**





Appendix: II. Toy

1. Summary Table of the Firms Interviewed

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Thai Toy Co.	Plastic Toys	1,000	injection machine 52 others	export OEM 100% Original 85% 15%	Joint Venture of Sri-Thai Superware (90%) & Hong Kong (10%) For both OEM and original, process from product planning to metal mold is done in H.K. Mold is provided for some of OEM products by customers. Hopes to have foreign metal mold industries in Thailand.
Bandai and K.C.	Plastic toys	350-450	injection machine 20	export (USA, Europe, Asia each 1/3) 100%	Joint Venture of Bandai (50%) & Imperial (50%) Product development/planning mainly in Japan, Mold from Japan & H.K. 80% of OEM brands is of Bandai. 80% promoted.
Yet Ming Toys Factory	Metallic/Plastic mini car	500	injection machine 22 diecasting machine 7 others	domestic export (U.S.A 70% Europe 20%) 5% 95% 80% of export is through holding company; 20% is direct sales	Joint Venture of Thai (5%) & H.K. (49%) Product planning in H.K.; Molding in Thailand with H.K. technician's technical assistance. Repairment/maintenance/control of mold in Thailand acc. to H.K. technician's instruction. Most interested in U.S. market.
Dynamic Toy	plastic toys/ miscellaneous goods	2,000-3,000	injection machine 20	domestic export (US 80%, Europe 20%, Japan 10%, others 10%) 10% 90%	Joint Venture of Thailand (70%), H.K. (30%). 100% OEM; Molds partly provided. In other cases produces molds by themselves by product sketch.

Plastic and Metal Toy <Middle>

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Jumbos Toy International	water pistol, Tel, house-play boys etc. 20 sorts. (general educational toys)	200 (Injection 30)	injection machine 14 pellet machine 1 mixer cutter 2 drilling machine 2 lathe 1 others 1	export 100% (U.S. 50%, UK. 20%, Canada 10% etc.)	Joint Venture with H.K. (49%). Product planning in H.K., mold production H.K. (80-90%) & local (10-20%). Partly OEM with U.S. Ambitious for self-planning/development in near future. Further ambition for enlargement of export.
Tomy Thailand	middle-level goods for kindergarden & elementary school lower grades	200	injection machine 15	export 93% (Europe 40%, U.S.A 30%, Japan 30%) domestic 7%	Japanese capital (100%) Product planning in Japan; Mold production in Japan, H.K., S'pore BOI promoted.
Thai Polyproducts	plastic toy (20%) pp bags	200	injection machine 18	order-receipt production (U.S. 40%, Australia/Middle East/Europe each	OEM 100%. For 10% of all, molds are brought by customers. For others, planned in Taiwan and produced in Thailand from sample. Belongs to Srithepthai Group. BOI promoted.
Lerdsin Industrial	Original brands 6 sorts for 3-year-old kids	150	injection machine 12	export 100% (U.K. 80%, Australia 20%)	BOI promoted. Product planning/Mold production in H.K., Repairment/Adjustment of mold in Thailand. Switzerland to OEM in 1987 after cooperation with Peak Point
Inter Plasma Thailand	Non-chemical doll 60sorts mechanical doll 12sorts Electrical doll 5sorts	81 (new factory 120-150)	injection machine 8 blow machine 10 (New Factory: injection machine 20)	export 100% (U.K. 65%, W.G. 25%, Belg 10%, Japan Australia :small)	BOI applied OEM 25%, Original 45%, copy from Taiwan/H.K./Japan 30% OEM: mold production from sample or plan Original: mold production from sample

Plastic and Metal Toy <Small>

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Saha Kam Chang	plastic processing	26-8	injection m. chusher	order - receipt - production	Changed from mold business 8 years ago. Negative business enlargement. Mold provided by customers.
Ha Seng Huat	Plastic toys, miscellaneous goods such as mini car, flash - light	20	injection m.	Export to Japan via original contractor (RLP International etc.)	Typical subcontractor of manufacturer customer plans product and provide molds.
Tang Chai/ Plastic Factory	plastic toy	50	injection	domestic export	OEM 25%, Copy 25%, Arranged copy 25% No product plan, but sketch mold is ordered externally to 4 subcontract without plan.
Thai Sincere Co.	plastic toy (pistol, sword etc.)	50-60	The a/m 13 is transferred To add 4 more	not in operation yet Export Dept. of the a/m Tang Chai is transferred and is planned to enlarge.	See the above. Ambitious for export
Thai poly Plastic	bobbin & Toy (50:50)	33 (4)	injection vertical injection	7 toys are delivered to Bandai-Dunamic Toy. 6	Produces mold from sample. (cf) Plastic mold

Stuffed Toy <Large>

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
First Corporation	rabbit, bear, Micky Mouse etc.	450 sewing 200 piercing wadding 250	8 piercing machine 100 sewing machine 4 wadding machine others	Japan First 90% Europe 10%	Top of stuffed toy industries in Thailand Only order-receipt production from Japan/ Europe. BOI promoted Joint venture of Japan (95.4%) & Thai (4.6%)
H & B Intertex	4 brands mainly stuffed animals	290	3 piercing machine 100 sewing machine 2 wadding machine others	Int'l Cosmetic Company 60% Export 40% (Europe 60%, Japan 30%, U.S.A others 10%)	Belongs to Saha Group. Prominent modern enterprise in East Asia. Ambitions for export.
Kase Rawee Co.	Pierrot doll, stuffed animal	200	1 piercing machine 25 sewing machine 3 wadding machine	export 100% (W.G. 65%, U.S.A 15%, Italian 12%)	Interested in export only. Hopes to apply for BOI promoted enterprise.

Stuffed Toy <Middle>

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Home Made Country Lady Group (HCL)	Panda bear, pink panther, mascots	15	6 piercing machine 4 sewing machine others are hand making	mainly for domestic (especially in Bangkok) partly for export	Hopes to begin OEM business Ambitious for export to Japan.
Three's Company Ltd.	carrying bag of koala bear, raccoon etc. (20 sorts)	30	10 sewing machine others are hand making	Direct business (domestic only)	90% of the products are copied or arranged- copied. Ambitions for export.
Udompol Trading Co.	Hair planted small doll (soft polyvinyl chloride)	38 (Will increase another 25 from Apr. 1988)	3 injection machine 3 hair planting 6 sewing machine	export 100% (Italian 70%, France, U.K., W.G. Finland, middle East)	Joint Venture of Thai (51%) and H.K. (49%) Doll is copied; Both design is original; Mold sample-copied in H.K. Techniques introduced from H.K. BOI promoted enterprise
Sudaporn Tananchai Group	"Girl" doll, Pierrot doll, Tissue paper box case	25	family-use sewing machine	mainly subcontracted work	Cooperative subcontractive work by women.

Stuffed Toy <Small>

Company Name	Production Item	Employee	Main Equipment	Main Customers	Characteristic
Ban Pooka Moo	Hill-tribe stuffed doll	10	Family-use old type sewing machine	Chainnat YMCA England Community Foundation	simple-styled production group. housewives' initiative.
Dolly Hut factory	Hill-tribe stuffed doll	7	family-use sewing machine	private shop partly to local trading company	simple-styled production group. housewives' initiative.

**Question Sheet (Plastic and Metal Toys)**

Date \_\_\_\_\_

Interviewer's Name \_\_\_\_\_

Translator \_\_\_\_\_

**A. General Provisions**

1. Name of company \_\_\_\_\_

2. Type of business \_\_\_\_\_

3. Address \_\_\_\_\_ Tel. \_\_\_\_\_

4. Interviewee's name \_\_\_\_\_

5. Capital \_\_\_\_\_

6. Capital composition \_\_\_\_\_

7. Yearly income \_\_\_\_\_

8. Employee composition \_\_\_\_\_

9. Site area \_\_\_\_\_ Factory area \_\_\_\_\_

10. Production facilities \_\_\_\_\_

(special molding machines) \_\_\_\_\_

11. Desired facilities \_\_\_\_\_

12. Main products \_\_\_\_\_

(composition price) \_\_\_\_\_

13. Yearly production capacity \_\_\_\_\_ Peak time \_\_\_\_\_

14. Main raw materials \_\_\_\_\_

(cost sources) \_\_\_\_\_

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<general evaluation>

**B. Technical Provisions**

**1. Product Plan and Development** \_\_\_\_\_

1.1 Management composition \_\_\_\_\_

1.2 Development time (planning-production) \_\_\_\_\_

1.3 Planning site \_\_\_\_\_

**2. Production Design Mold Design**

2.1 Management composition \_\_\_\_\_

2.2 Product design process \_\_\_\_\_

2.3 Mold design process \_\_\_\_\_

2.4 Mold production \_\_\_\_\_

2.5 Production method \_\_\_\_\_

**3. Production Technology**

3.1 Mold technology \_\_\_\_\_

3.2 Process plan preparation \_\_\_\_\_

3.3 Operation standard preparation \_\_\_\_\_

**4. Quality Management System**

4.1 Management composition \_\_\_\_\_

4.2 Acceptance inspection \_\_\_\_\_

4.3 Line inspection \_\_\_\_\_

4.4 Final inspection \_\_\_\_\_

**5. Molding machines in possession**

\_\_\_\_\_

**6. Technical Problems**

\_\_\_\_\_

**7. Other**

\_\_\_\_\_

\_\_\_\_\_



C. Sales

1. Production Cost

1.1 Production cost ratio \_\_\_\_\_

1.2 Cost composition \_\_\_\_\_

1.3 Previous cost comparison \_\_\_\_\_

2. Management Sales

2.1 Management policy \_\_\_\_\_

2.2 Main customers \_\_\_\_\_

2.3 Lot volume \_\_\_\_\_

2.4 Sales form \_\_\_\_\_

2.5 Market growth strategy \_\_\_\_\_

3. Cooperative partners

3.1 Product cooperation \_\_\_\_\_

3.2 Technical cooperation \_\_\_\_\_

4. Points of difficulty

\_\_\_\_\_  
\_\_\_\_\_

D. Foreign Development

1. Export experience \_\_\_\_\_

2. Export form \_\_\_\_\_

3. Import experience \_\_\_\_\_

4. Import form \_\_\_\_\_

5. Export desires \_\_\_\_\_

6. Concerns toward the Japanese market \_\_\_\_\_

7. Concerns toward other country markets \_\_\_\_\_

### Interview Field Sheet

1. Date of visit	2. Interviewer				
3. Name of company					
4. Address					
5. Telephone	6. Other company's name				
7. Capital (composition)	8. Yearly Sales (Rate of expansion)				
9. Production site floorspace	10. Impression of management				
11. Employee composition					
<table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%; text-align: center;">Total</td> <td style="width: 33%; text-align: center;">male</td> <td style="width: 33%; text-align: center;">female</td> </tr> </table>			Total	male	female
	Total	male	female		
12. Facility composition					
13. Merchandisers (number)	14. Main product surplus				
15. Planning motive	16. Planning to production speed				
17. Production capacity					
18. Production problems and impressions					
19. Impression toward the Japanese market and grade	20. Points for improvement				
AA A A- B B- C+ C C- D+ D					
21. Facility needs					
22. Reflection on planning problems strong points					
23. Comment on producers which are selling well in Japan	24. Evaluation on answer 23 in Kobe				
25. Packing contents	26. Export wrapping form 94 time of shipment				
27 Important stock materials					
28 Percentage of production cost (interest rate)	29. Cost composition raw material expense percentage personnel expense percentage				
30. Major customers					
31. Mark up rate					

32. Minimum transaction volume	
33. Items of note concerning transactions	
34. Other sales forms	
35. Plans for market increase	
36. Product cooperation	
37. Export experience	
38. Export needs	39. Export credit rate
40. Concerns toward the Japanese market	
41. Impressions of present production site	
42. General evaluation and impression	
43. Noteworthy items summary	

## **2. Plan for Study in Other Countries (Sample)**

Products to be Studied: Plastic, metal and fabric toys (stuffed toys)

### **U.S. Toy Market**

#### **Research Items**

**I. Brief Description of the Present Situation Concerning the U.S. Toy Market (plastic, metal, and fabric)**

#### **II. Demand and Supply**

1. Domestic supply
2. Market share of imports
3. Competition between domestic and imported products
4. Domestic consumption
5. Consumption patterns
6. Quality, design and brand

#### **III. Export and Import**

1. Export situation  
(including 1983-87 export figures, volume and value, by country)
2. Import situation  
(including 1983-87 import figures, volume and value, by country)

#### **IV. Distribution**

1. Distribution channels (including mark-ups at each stage)
2. Pricing
3. Sales strategy

#### **V. Import Duties and Regulations**

1. Custom duties
2. Related regulations

#### **VI. Future Outlook**

Describe the prospects for the future of the market

## **Toy Industry in China**

Industry to be studied: Toy industry, with particular emphasis on plastic toys, metal toys, and fabric toys (stuffed toys)

Region to be studied: People's Republic of China

### **Survey Items and Details**

#### **1. Summary of Industry**

Based on the results of the surveys of the items mentioned in Item (2.), a summary will be made of the state of the toy industry in the People's Republic of China from the viewpoints of production, sales, exports, company management, level of technology and product development, etc. Projections also will be given on the future of the industry.

#### **2. Industry Trends**

Based on production statistics (shipments) for individual items in the past 10 years, clarification will be made on the trends in production activities of the toy industry as a whole and by individual item.

Further, through interviews with relevant persons in government, industry and key manufacturers, it will be learned what kind of problems have been faced and the efforts which have been made to overcome them, in particular on the following points.

- a. Production system
- b. Labor problems
- c. Procurement of raw materials, parts, and dies and molds
- d. Competitiveness (production costs)
- e. Safety standards, regulations, and product inspections
- f. Technical capabilities and product development.

#### **3. Trends in Exports**

Based on statistics for exports of individual products during the past 10 years, clarification will be made of the trends in exports by item and destination, of the changes in the items, etc.

Further, through interviews with relevant persons in government, industry, key manufacturers, export trading companies, etc., information will be obtained on problems, and means for their solution, in particular on the following.

- a. Safety standards, regulations, and product inspections

- b. Export channels
- c. Export prices
- d. Product development and design
- e. Development of overseas markets and marketing activities
- f. Competitive relations in overseas markets.

#### 4. Industrial Promotion Policies and Export Promotion Policies

It will be learned from relevant government officials, persons in the industry and companies what kind of policies the government has taken and what systems it has established to overcome the problems clarified in Items (2.) and (3.), and what kind of effects these have had. Further, the kinds of promotional measures and preferential measures that have been taken in the areas of financing, taxation, and customs duties will be summarized.

#### 5. Case Studies of Key Companies

Case studies will be made, based on the following points, covering five to 10 key toy manufacturers (also ones important in exports):

- a. Company histories
- b. Trends in key production and export items
- c. State of procurement of raw materials, molds and dies, and parts
- d. Use of government assistance and promotional measures
- e. Development of export strategies
- f. Tie-ups with overseas companies and moves toward overseas investment
- g. Managers.

#### 6. Collection of Related Materials, Pamphlets, etc.

Materials, pamphlets, export oriented catalogs, and other materials of the toy industry and toy manufacturers in the People's Republic of China obtained during the process of this survey will be appended.

## **APPENDIX: III. OTHERS**





## Appendix: III. Others

### 1. Small Enterprise Corporation (Japan)

Japanese small businesses are carrying out numerous policies for modernization, improvement in management, and technical upgrading. The small Business Corporation was legally established as a comprehensive agency for such firms.

The general outline of the corporation is as follows ( as of March 1987):

- Capital: ¥983.7 billion (all government financed)
- Small business upgrading financing reserves: ¥950.5 billion
  - Breakdown - A form ¥668.6 billion
  - B form ¥262.5 billion
  - future acquisitions ¥19.4 billion
- Small business training participants approx. 82,000 persons
  - Breakdown - management training 54,000
  - technical training 28,000
- Small business mutual aid affiliation registration: approx 1.5 million firms
- Small business bankruptcy prevention mutual aid affiliation registration: approx. 90,000 firms

#### 1. Small Business Guidance and Upgrading Financing

##### (1) Upgrading Project

For the purpose of sound growth and upgrading it is necessary for small businesses to plan for the modernization and rationalization of management. The Small Business Corporation is making a positive contribution to aid through cooperative power. It is making a drastic improvement in the strength of those firms of similar type or those having a deep relationship which are grouping for collaboration and unification through the "Small Business Structural Upgrading" project.

##### (2) Consulting for Upgrading

The Small Business Corporation with each industry trade office and all the prefectural governments, is carrying out an investigation concerning the basic formation of a plan for upgrading, and is giving guidance on those matters of importance concerning the method of carrying out this upgrading. To those firms attempting to receive capital for financing for upgrading, from the time of planning the corporation is working with the prefectural governments to carry out investigations and is acting as a drive for upgrading.

In Particular, for certain enterprise categories specified by business circles, since it is a time all businesses are attempting improvements in structure, the Small Business Corporation is providing guidance.

### (3) Types of Upgrading

Depending on the type of business, the business structure, or the method of upgrading there are a number of types of developing enterprises, and upgrading is being carried out by various means, For example:

- Enterprise facilities cooperative use project for small scale manufacturers, retailers, wholesalers, transportation businesses, builders and others
- General cooperation project
- Factory cooperation project
- Specific facility cooperation projects
- Structural improvement upgrading project

### (4) Financing System for Upgrading Projects

For harmonious execution of upgrading projects, from the planning stage to the operation stage, finance and guidance is provided for land, buildings, and facilities.

## 2. Concerning Small Business Personnel

### (1) Small Business University

Since it is necessary to obtain excellent workers; the corporation has established the Small Business University as a facility of higher education where various types of instruction will take place. High level training of management and technology for the participating firms and their employees will be carried out, and will play a large role toward the improvement of technology and the rationalization of management.

### (2) Small Business Research Institute

In order to achieve sound progress worker training, technical upgrading, and the completion of management resources, there is a need for an accurate and swift policy concerning the rapidly changing environment. At the Small Business University, for even greater research activity concerning small business the Small Business Research Institute has been established.

### **(3) Small Business OA System Center**

For those firms wishing to computerize management a consulting and guidance facility has been established

### **3. Small Business Information Processing**

The significance of making the best use of information for small business in areas such as management is increasing, but, a considerable difference exists between large and small businesses concerning the collecting and proper use of information.

Therefore, the Small Business Corporation has established the Small Business Information Center. To eliminate the difference between large and small businesses it will collect useful information and will present it in an easy to understand form. To correct differences that exist between different areas regional Small Business Information Centers will be established in each prefecture, and a system of on-line retrieval for local businesses will be arranged.

#### **(1) Information Center**

Information necessary to small businesses will be selected, processed in an easy to understand manner, and arranged in a database. The regional Small Business Information Centers will send information and relevant news to participants through periodicals and publications.

#### **(2) Technology Transfer Technology Exchange**

To develop new products from existing technology and enable production of high production cost items, small businesses are promoting technology exchanges and transfers.

#### **(3) Technical Upgrading**

In order to improve small business technical ability, facility and plant upgrading is being carried out.

#### **(4) Small Scale Business Mutual Aid System**

The small scale business owners' mutual aid system is acting with the purpose of advancing the welfare of small scale entrepreneurs and promoting small scale businesses.

**(5) Small Business Bankruptcy Prevention Mutual Aid System**

In order to prevent small business bankruptcy or falling upon hard financial times from the effects of business partners, this mutual aid system was established, contributing to the stability of small businesses.

## **2. List of Members Concerned**

### **Steering Committee**

1. Director-General Chairman  
Department of Industrial Promotion (DIP)
2. Deputy director-General (Mr. Manu Leoparote) Vice-Chairman  
Department of Industrial Promotion (DIP)
3. Director of Planning Division  
Department of Export Promotion (DEP)
4. Director of Industrial Economics & Planning Division  
Office of the Permanent Secretary, Ministry of Industry
5. Director of Planning Division  
Board of Investment (BOI)
6. Mr. Thamnu Vasinonda  
(Director of Thailand Management Development and Productivity Center)
7. Dr. Damri Sukhotanang  
(Director of the Metal-Working and Machinery Industries Development Institute)
8. Chief of Industrial Planning Coordination Section  
Office of the National Economic and Social Development Board(NESDB)
9. Representative of the Association of Thai Industries
10. Director of Planning Division Secretary  
Department of Industrial Promotion
11. Director of Industrial Development Center Asst. Secretary  
Department of Industrial Promotion

### **ADVISORS**

1. 1st Secretary, Embassy of Japan (Mr. Shoichi Ikuta)
2. JICA Expert (Mr. Akira Kuroda)
3. JICA Expert (Mr. Kenichi Kohata)

## **List of Thai Delegation**

### **Department of Industrial Promotion (DIP)**

1. **Mr. Manu Leopairote** Deputy Director-General (Chairman)  
Acting for Director-General
  2. **Mr. Padetpai Meekun-iam** Director of Planning Division
  3. **Mr. Somsak Kuptakanchanakul** Director of Industrial Service Division
  4. **Dr. Damri Sukhotanang** Director of the Metal-Working and  
Machinery Industries Development Institute  
(MIDI)
  5. **Miss Yawanit Thongpahasatcha** Chief of Design Promotion Group  
Industrial Service Division
  6. **Mr. Sivasak Boonayodom** Chief of Research & Development Group,  
MIDI
  7. **Mr. Suwat Siwasaranond** Chief of Survey & Research Sub-Division  
Planning Division
  8. **Mr. Protpimol Sukhavanija** Chief of Product Design Section  
Industrial Service Division
  9. **Mr. Wirat Amornlervit** Chief of Industrial Study Section  
Planning Division
  10. **Mrs. Suda Thongsri** Industrial Technical Officer  
Planning Division
  11. **Miss Suwanee Tassanapirom** Economist  
Industrial Development Center
  12. **Mrs. Sunimol Supangrat** Industrial Technical Officer, MIDI
- Mr. Koki Suganuma** **ISD, JICA EXPERT**



JICA