

## **2.1.5 Investment Promotion**

### **(1) Investment Promotion Services by the BOI**

The BOI works on behalf of investment promotion in Thailand. Its assistance is available to all enterprises irrespective of the type or scale of business. The BOI has not offered any specific assistance to promote investment by SMEs.

The BOI has offered the following investment promotion services to Thai and foreign investors.

- Information services on investment opportunities
- Promotion of the supporting industries (by BUILD)
- Match-making services
- Promotion of overseas investment by Thai enterprises

#### **1) Information Services on Investment Promotion**

The Investment Service Center and the Regional Investment Promotion Department accumulate data and information on investment opportunities (by sector and by region) to offer free consulting services to Thai and foreign investors.

#### **2) Promotion of the Supporting Industries by BUILD**

The BOI Unit for Industrial Linkage Development (BUILD) maintains a database concerning the supporting industries as a means for promoting subcontracting.

#### **3) Matchmaking Services**

The BOI acts as a medium to promote matchmaking among domestic investors and foreign investors.

#### **4) Promotion of Overseas Investment by Thai Enterprises**

The BOI dispatches missions for investment promotion to foreign countries including Indochina and ASEAN countries, to collect information on laws and

regulations. It offers such information free to Thai investors interested in joint ventures.

**(2) Investment Incentives by the BOI**

The BOI has given the following incentives to Thai and foreign investors in conformity with the Investment Promotion Law (promulgated in 1977 and modified in 1991).

- **Non-taxational favors**
  - Admission of foreign consultants for feasibility studies
  - Admission of foreign engineers or specialists for promotional projects
  - Ownership of the lands for promotional projects
  - Allowance of taking-out or remittance of foreign currencies
  
- **Taxational privileges**
  - Exemption or deduction of import taxes for machinery
  - Deduction of import taxes for raw materials or facilities
  - Special treatment concerning corporate income taxes
  - Special treatment (concerning tariffs and corporate income tax) to export firms
  
- **Additional privileges to enterprises located in special promotion areas**

The BOI designates the Investment Zone 3 as a special promotional area to give special treatments as follows.

  - 50% deduction of corporate income taxes in 5 years (after the their exemption term)
  - Deduction of double expenses for transportation, electricity, and water (in 10 years)
  - Deduction of expenses for building infrastructure (within 25% of total expenses)
  
- **Privileges to export enterprises**
  - Exemption of import taxes for raw materials and components
  - Exemption of import taxes for re-export



- Exemption of export taxes
- Deduction of 5% of income increase caused by export promotion (from taxable corporate income)

### (3) Trend of Foreign Direct Investment

Table 2.1-4 shows the number and investment amount of the projects which received Promotion Certificates from the BOI from 1996 to 1998.

Table 2.1-4. Projects Receiving Promotion Certificates, 1996 to 1998

	1996		1997				1998			
	Number of Projects	Value of Investment (mil. Baht)	Number of Projects		Value of Investment (mil. Baht)		Number of Projects		Value of Investment (mil. Baht)	
<b>TOTAL</b>	942	427,100	836	(-11.3)	412,300	(-3.5)	634	(-24.2)	261,503	(-36.6)
<b>By Sector</b>										
Agricultural products	137	19,475	100	(-27.0)	11,026	(-43.4)	99	(-1.0)	16,920	(+53.5)
Minerals & ceramics	84	101,345	55	(-34.5)	46,972	(-53.7)	14	(-74.5)	14,925	(-68.2)
Light industry	73	6,437	62	(-15.1)	11,045	(+71.6)	91	(+46.8)	6,159	(-44.2)
Chemicals & paper	167	67,740	142	(-15.0)	87,740	(+29.5)	87	(-38.7)	59,361	(-32.3)
Metal processing	177	63,797	181	(+2.3)	32,917	(-48.4)	98	(-45.9)	17,398	(-47.1)
Electronics & electrical	150	69,202	117	(-22.0)	66,372	(-4.1)	126	(+7.7)	55,762	(-16.0)
Services	154	99,081	179	(+16.2)	158,260	(+57.7)	119	(-33.5)	90,977	(-41.8)
<b>By Country</b>										
Japan	278	147,912	255	(-8.3)	98,188	(-33.6)	180	(-29.4)	102,013	(+3.9)
United States	46	36,247	63	(+40.0)	56,700	(+56.4)	62	(-1.6)	36,025	(-36.5)
NIEs	144	97,862	125	(-13.2)	63,891	(-34.7)	155	(+24.0)	35,020	(-45.2)
Europe	69	20,855	82	(+18.8)	70,404	(+237.6)	89	(+8.5)	58,204	(-17.3)
<b>By Zone</b>										
1: Bangkok & vicinity	125	1,600	131	(+4.8)	68,400	(+4,175.0)	195	(+48.9)	64,700	(-5.4)
2: 10 provinces around Zone 1	198	90,100	170	(-14.1)	128,700	(+40.6)	164	(-3.5)	48,700	(-61.6)
3: Rest of country	619	305,400	535	(-13.6)	217,200	(-28.9)	275	(-48.6)	148,000	(-31.9)

(Notes) 1. The figures in the parentheses mean % changes from the previous year.

2. Projects receiving promotion certificates were registered and a percentage of their registered capital was already paid up.

3. The data by country do not add to the total as projects with more than one foreign shareholder are counted twice. Country statistics generated by International Affairs division of the BOI.

Source: BOI

According to the table, projects receiving promotion certificates in 1998 decreased 24% in volume and 37% in investment value, reflecting the economic crisis. Some sectors, namely minerals and ceramics, chemicals and paper, metal processing, and services, experienced a sharp decline. Particularly, the minerals and ceramics sector results decreased to less than

one third in volume and value, and that for the metal processing sector was reduced almost by half in volume and value. In the electronics and electrical sector, the number of projects increased slightly, but their investment amount decreased 16%. The projects in the light industry sector increased 47% in number while they decreased 44% in value, indicating that the average investment in this sector was sharply scaled down. In the agricultural products sector, however, the investment amount of the projects increased 54%, although the number of the projects remained almost same. As far as the agricultural products sector is concerned, no serious influence of the economic crisis can be seen.

By country, investment from Japan in 1998 declined 29% in the number of cases, but it slightly increased in value. The projects for expansion of the existing facilities or promotion of the export of their manufactured products increased remarkably in Japan's investment for 1998. The projects for expansion accounted for 66.1% in total number (51.4% in 1997) and 70.8% in total value (32.9% in 1997) and 59.8% in total value (40.3% in 1997). On the contrary, investment from the NIES grew 24% in number, but decreased to almost half in value. By investment zone, the projects in Zone 1 (Bangkok and vicinity) in 1998 increased nearly 50% in number while they decreased in value, indicating that investment in the Zone 1 was sharply scaled down. The projects in Zone 2 (10 provinces around the Zone 1) declined more than 60% in value although their number decreased by only a few. Moreover, the number of the projects in the Zone 3 (rest of country) was reduced almost by half in 1998.

#### **2.1.6 Market Development and Export Promotion**

Support to develop the domestic market is given mainly by the BOI, the BIRD, and the BSID. The BUILD has carried out its Vendors Meet Customers Program (VMC) since November 1997, from the viewpoint of enhancing investment in automotive parts and electronic components. This program is being implemented in the following steps.

- (1) The BUILD arranges the schedule for visiting an assembly factory for automobiles or electrical/electronic equipment.

- (2) The assembler submits a list of the parts/components which it imports to the BUILD and makes preparations for receiving the planned factory visit.
- (3) The BUILD selects some domestic suppliers of the above imported parts/components, using its database.
- (4) The BUILD recommends those selected parts/components suppliers to participate in the planned factory visit.
- (5) The BUILD takes the parts/components suppliers to the assembling factory to assist the both sides in initiating business.

The VMC program is beneficial to the both assemblers and parts or components suppliers. Parts or components suppliers can understand what assemblers actually need (i.e., quantity, specifications, quality, price, delivery, etc.) while assemblers can learn about the supply capability of parts and components manufacturers. Under this program, the BUILD has visited 18 assemblers to date. On the average, 50 to 60 parts or components suppliers participate in each factory visit. The following lists the assemblers visited. The figures in the brackets show the number of participants.

Fujitsu (Thailand) Co., Ltd. <40>  
 Matsushita Electronic Components (Thailand) Co., Ltd. <23>  
 General Motors (Thailand) Co., Ltd. <91>  
 ADI (Thailand) Co., Ltd. <36>  
 Tatung (Thailand) Co., Ltd. <36>  
 Seagate Technology (Thailand) Co., Ltd. <40>  
 Siam NEC Co., Ltd. <34>  
 Capetronic International (Thailand) Public Co., Ltd. <23>  
 Sharp Appliances (Thailand) Ltd. <65>  
 Toshiba Consumer Products (Thailand) Co., Ltd. <34>  
 IBM Storage Products (Thailand) Ltd. <13>  
 Canon Hi-Tech (Thailand) Ltd. <47>  
 Delta Electronics (Thailand) Pcl. <68>  
 Mitsubishi Electric Consumer Product (Thailand) Co., Ltd. <30>  
 Distar Electric Corp. Public Co., Ltd. <62>  
 LTEC Ltd. <51>  
 Murata Electronics (Thailand) Ltd. <46>

Hana Microelectronics Public Co., Ltd. <53>

Furthermore, the BOI started information services by using the Asian Supporting Industries Database (ASID) in April 1999. The ASID has been constructed on the basis of the BUILD Database which covers more than 3,000 enterprises including SMEs located in Thailand. The ASID includes more than 7,000 enterprises located in ASEAN or Indochina countries.

The BSID also offers information and consulting services to encourage matchmaking between assemblers and parts or components suppliers, from the viewpoint of promoting subcontracting deals in the supporting industry.

With regard to export promotion, tax privileges for export firms, as mentioned above, are applied to SMEs as well as larger enterprises. The government has also helped SMEs participate in international trade fairs and competitive exhibitions of products. The BISS also offers a packaging service for small-sized food manufacturers. It arranges for several groups of manufacturers to use common packaging designs developed by the BISS. This service aims to assist small-size manufacturers with small production lots and limited outlets in expanding their sales including exports.

From this year, the Thai government is giving SMEs financial, tax-related and marketing support to develop export markets.

As financial support, since May 1999, the Export-Import Bank of Thailand now issues trade insurance based on export bills or letters of credit received by small-lot exporters. The trade insurance is intended to relieve small-lot exporters of their risks to develop new export markets. Since small-lot exporters can cash export bills at the Export-Import Bank of Thailand, they do not have to worry about raising funds when they sign an export contract. The trade insurance for exportation with a letter of credit can cover bankruptcy or default of the banks issued the letter of credit. The Export-Import Bank of Thailand is also providing SMEs with packing credit at preferential interest rates when they engage in export business. The total funds available for packing credit amounts to 2 billion bahts.

As to tax-incentives, the Ministry of Finance, the National Tax Administration Bureau, and the Department of Export Promotion of the Ministry of Commerce are trying to introduce a measure authorizing deduction from corporate tax of double the amount of expenses needed to enter the export market. Moreover, in May 1999 the BOI decided that exemption of import duties on raw materials should be applied not only to the three existing industries (leather, ready-made clothes, and shoes), but to eight industries shown below. This measure targets export firms which have not been approved by the BOI.

- Daily necessities, interior goods
- Textile products
- Toys
- Sporting goods
- Components for transport machinery
- Plastic products, resin surface processed products
- Electronics products and components
- Electrical products and components

The BOI has so far exempted import duties on machinery for two years to the enterprises to which it has given promotional certificates. In May 1999 the BOI decided that the exemption period of import duties for manufacturing machinery for metal molds and electronics products/components should be prolonged from two to five years.

As to marketing support, the government worked out a five-year program to develop new export markets. This program aims to expand the export of Thai products beyond their traditional destinations of Japan, the United States, and western Europe. In the program, new export markets include 127 countries, in seven regions (neighboring countries, China, South Asia, Middle East, Africa, East Europe, and Latin America). The program sets targets and strategies for each region. The Thai Export-Import Bank of Thailand supplies credit guarantees to firms trying to make inroads in these markets. The source of funds for this is the International Trade Promotion Fund that is committed to providing 150 million bahts annually for five years, or 750 million bahts in total, to the Export-Import Bank of Thailand. The guarantees will permit reduction of the interest burden by up to 5%, the extent of the reduction depending on the



export sales by firms. The Department of Export Promotion of the Ministry of Commerce is the leading organization implementing a five-year program to supply information services to exporters, to invite foreign importers to trade fairs and exhibitions, and to dispatch trade missions abroad. The tax incentive mentioned above is given to firms trying to enter those new export markets.

## **2.2 Actualities of SMEs Finance in Thailand**

### **2.2.1 General Problem of Financial System for SMEs**

The financial sector is now undergoing reforms and restructuring based on the guidelines of the IMF and Thai monetary authorities. However, the speed of restructuring has been slower than expected because of delay in the preparation of laws and regulations related to bankruptcies, and in liquidation of collateral. The delay of commercial banks restructuring is an important factor related to the recovery of the real economy.

Strict policy regarding the existing loans classification has helped make banks reluctant to extend new loans and is becoming an important source of a credit crunch. The World Bank estimates the ratio non-performing loans of Thai commercial banks to be over 50%. It is hard to imagine the recovery of commercial banks without the government's financial support. Other than this support, the following changes are recognized as important.

- Banking supervision system modernization
- Restructuring of financial institutions
- Reform of small financial institutions, including but not limited to restructuring, change in their roles, way of management, etc.
- Preparation of laws and regulations to facilitate private sector investment, including that by foreign investors, in the financial sector
- Revision of bankruptcy law
- Rescheduling and restructuring of corporate debts

The following is a summary of the measures announced and enforced for each point above.

#### **① Banking Supervision System Modernization**

The Thai government announced a financial sector restructuring program in August 1998, including support with public money.

The core of this program is recapitalization of financial institutions. The government announced the intention to purchase preferred shares and/or subordinated debt to increase the capital of commercial banks. This program requires the banks to clarify the responsibilities of mis-

management, and undertake restructuring. Through this process, the supervisory function of monetary authority will be strengthened.

② Restructuring of Financial Institutions

Many banks have established an Asset Management Department to tackle the non-performing problem and assigned many bankers to work there. Decision making on new loans is being transferred to branches instead of the head office to pay more attention to local conditions. Banks are making efforts of restructuring, by concentrating on both existing loans and new loans.

③ Reform of Management and Functions of Governmental Financial Institutions

Regarding financing to SMEs, the IFCT and SIFC, which had been expected to focus on SME financing when they were established, have been not performing as expected, as shown by their share in SME financing.

④ Recapitalizing Banks

Preparation of law and regulations to facilitate the investment from private sector, including foreign investors, to the financial sector. Previously 25% was the ceiling for foreign investors to invest in Thai banks, but this has been relaxed.

⑤ Bankruptcy Law Revision

The Thai government has had to revise the bankruptcy law to facilitate the banks' treatment of their non-performing loans. Because some members of the national assembly were also executives at large corporations, there was some resistance to revision, but revision was approved in March 1999.

⑥ Restructuring of Corporate Debts

In order to facilitate the negotiations between banks and borrowers, the Corporate Debts Restructuring Advisory Committee (CDRAC) was established under the Bank of Thailand in August 1998. CDRAC is expected to intermediate the negotiation on restructuring. In addition,

guidelines for restructuring have been set, as the basis for negotiations. These efforts reflect the advice of the IMF, the World Bank and the Asian Development Bank. The World Bank is advising on supervisory functions, restructuring of Krung Thai Bank etc. The Asian Development Bank is advising on the restructuring of SFIs, such as IFCT, SIFC, SICGC. For the SFIs which are dedicated to SME finance, Japan is expected to provide advice based on Japan's experiences.

## 2.2.2 Financial Institutions and SMEs Financing

Commercial banks are in a dominant position in terms of size of formal-sector credit extension for SEMs. This is implied by their number (see Table 2.2-1) and loan balance.

Table 2.2-1. Major Financial Institutions in Thailand

	Domestic commercial banks	15
	Foreign banks branches	20
	Foreign banks offshore branches	19
SFIs	IFCT	
	SIFC	
	SICGC	
	GSB	
	BAAC	
	Exim Bank	
Finance Companies	Finance companies	9
	Finance companies & Securities brokers	26
Others	Investment Trust, Insurance	
	Companies etc	

Source: Bank of Thailand Quarterly Bulletin

Table 2.2-2. Outstanding Loan Amount by Nature of Financial Institutions

	Credit Outstanding (Billion bahts)	Percentage
Commercial banks	61,132	75
Finance companies	12,923	16
IFCT	1,603	2
SIFC	12	0
GSB	1,177	1
BAAC	1,972	2
GHB	2,787	3
Exim Bank	246	0
SICGC	17	0
Total	81,869	100

Source: Bank of Thailand Quarterly Bulletin  
(SICGC=Guaranty Amount)

Finance companies are facing a non-performing loan problem due to their high exposure to mortgage loans, which is a similar problem to that of commercial banks. 58 Finance Companies were ordered to suspend business during June to August 1997. Some have tried to increase their capital by acquiring foreign investment and merging with other financial institutions. The majority of those finance companies could not solve their non-performing loan problem. October 1997, The Asset Management Corporation was established to manage the suspended finance companies. Seven finance companies which were judged to lack potential to be restructured were nationalized in May 1998. As of end of May 1998, only 35 finance companies are operating. Among these 35, seven were nationalized. From these conditions, it is hard to expect that finance companies could take on a big role in SME financing. Excluding the outstanding loan amount of finance companies of 1,292 billion bahts, the share of commercial banks in the lending market is 89%. Commercial banks are responsible for around 90% of outstanding credit extended and it would be hard to imagine SMEs financing without their involvement. The share of SFIs in the credit market is IFCT 2%, and SIFC 0.01%. Their presence is so small that revision of their role should be given attention.

Table 2.2-3 shows deposits outstanding. Here too the commercial banks are dominant.

Table 2.2-3. Deposit Balance as of the End of 1997

	Deposit ( Billion bahts)	Percentage
Commercial banks	42,825	74
Finance companies	5,564	10
IFCT	0	0
SIFC	12	0
GSB	2,468	4
BAAC	1,273	2
GHB	1,730	3
Exim Bank	3,823	7
<b>Total</b>	<b>57,695</b>	<b>100</b>

Source: Bank of Thailand Quarterly Bulletin

Table 2.2-4. Amount of Fund Raising in the Capital Market

(Unit: Hundred millions)

	Public bonds	BOT	Equities	Debentures
1992	270		557	88
1993	604		551	174
1994	571	590	1,372	590
1995	552	295	1,296	524
1996	574	1,388	1,179	538
1997	503	1,890	633	184

Source: Bank of Thailand Quarterly Bulletin

Table 2.2-5. Local Commercial Banks

	Establishment	Number of Employees	Total Assets (Billion bahts)
Bangkok Bank P.C.L.	1944	25,000	1,408.6
The Thai Farmers Bank P.C.L.	1945	15,370	795.4
The Krung Thai Bank P.C.L.	1966	16,252	792.7
The Siam Commercial Bank P.C.L.	1906	12,679	717.2
Bank of Ayudhaya P.C.L.	1945	12,322	493.9
The Thai Military Bank P.C.L.	1957	8,149	389.5
First Bangkok City Bank P.C.L.*	1934	3,778	316.1
Siam City Bank P.C.L.*	1941	6,130	272.1
Bangkok Metropolitan Bank P.C.L.*	1950	5,760	190.6
Bank of Asia P.C.L.	1939	2,319	156.6
The Bangkok Bank of Commerce P.C.L.*	1944	5,390	146.0
The Thai Danu Bank Ltd.	1949	3,410	130.3
Nakornthon Bank Ltd.	1933	2,149	73.8
The Union Bank of Bangkok Ltd.	1949	2,721	73.3
The Leam Thong Bank Ltd.	1948	1,177	51.9
<b>Total</b>		<b>122,606</b>	<b>6,008.0</b>

\* Nationalized in early 1998

Source: Bangkok Bank, "Commercial Banks in Thailand 1998"

Thus, the commercial banks dominate the financial market. The five large banks hold around 70% of total assets. This means that measures related to SME financing must involve these large domestic commercial banks.

Table 2.2-6. Foreign Banks

	Started	Employees	Total Assets (Billion bahts)
Bank of Tokyo Mitsubishi	1962	353	215.1
Sakura Bank	1952	241	159.1
Daiichi Kangyo Bank	1997	109	172.6
Sumitomo Bank	1997	83	188.1
IBJ	1997	81	129.0
Citibank, N.A.	1923	1,097	119.5
The Hong Kong & Shanghai Bank Corp.	1888	650	85.4
Standard Chartered Bank	1894	466	53.3
Deutsche Bank AG	1988	202	50.6
The Chase Manhattan Bank N.A.	1964	106	50.6
Bank of America NT & SA	1949	172	43.1
ABN-AMRO Bank N.V.	1909	108	38.6
Dresdner Bank A.G.	1997	63	36.9
Credit Agricole Indosuez	1897	195	33.3
Banque Nationale de Paris	1997	52	27.4
Overseas Chinese Banking Corp. Ltd.	1919	52	9.7
The Bank of China	1997	42	7.9
The Int'l Commercial Bank of China	1947	67	7.7
Bharat Overseas Bank Ltd.	1947	51	3.5
Sime Bank Berhad	1964	49	2.2
Total		4,239	1,433.6

Source: Bangkok Bank, "Commercial Banks in Thailand 1998"

Among the foreign banks in Thailand, (see Table 2.2-6) the European and American banks have a long history. Their major interest has been to support the activities of companies of their mother countries, trade finance, and, more recently, to participate as lenders in the offshore market. It would be hard to imagine that they become important for SME financing.

### **2.2.3 Major Reason for the Constraints on SME Financing**

The major reason for difficulties in financing SMEs are as follows:

#### **(1) Private Sector Commercial Banks**

##### **1) Reluctance to take on commercial risks**

The majority of commercial banks have the difficult problem of managing non-performing loans. The estimate of the World Bank is that the share of those loans could exceed 50%. This situation necessarily has greatly reduced their ability and willingness to make new loans. Further, they had not developed proper methods for evaluating the creditworthiness of loan applicants, and had relied too much on the collateral. Therefore, the majority of those commercial banks do not have the know-how of credit analysis based on cash flow analysis and they tend to be more reluctant to take on risks because of this.

Financial institutions are required to treat their loans by rigid standards of Bank of Thailand due to the situation of significant increase of non-performing loans. If the borrowers delay the repayment of interest and principal and/or if the borrowers have net loss for two years consecutively, financial institutions have to put loan loss provision. Due to increased loan loss provision, the equity ratio is decreasing. To be harmonized with international standard, financial institutions have to increase their equity percentage. For this purpose, Thai Government is recommending in principle following two alternatives: (1) acceptance of investment from foreign banks, and (2) a government support program to purchase preferred shares and subordinated debts.

To benefit from the above government support program, executives management of financial institutions have to acknowledge their own mistakes and take responsibility for them. Therefore few banks have applied for this.

It will take a long time to improve credit analysis know-how, even though we can expect some improvement through the participation of foreign banks.



## 2) Lack of Long Term Finance

In the bubble period, banks relied too much on short term fund raising, such as offshore BIBF funding, and domestic deposits were concentrated in short-term instruments. The following is the breakdown of the commercial banks' total deposit balance, according to Bangkok Bank (giving figures slightly different from those of the Bank of Thailand) that show only 8% of 4 trillion bahts of deposits are for more than a one year term. Or, around 90% of deposits is concentrated in the term of up to one year. The data are for 1997 but the situation is one of long standing. Under such conditions, Thai commercial banks financed long term investment projects by rolling-over short term financing. In the long term, it can be expected that banks will improve their asset and liability management (ALM) skills and will try to diversify the sources of long term financing. However, in the short term, it is important that the functions of the SME sector Banks be improved.

Table 2.2-7. Deposits at Commercial Banks (as of the end of 1997)

(Unit: Hundred million bahts)

Checking Account	948
Saving Account	8,495
Time Deposit	
Less than one year	28,862
More than 1 year, less than 2 years	3,345
More than 2 years	593
Total	42,243

Source: "Commercial Banks in Thailand 1998"

## (2) Financial Institutions for SMEs

There is only one financial institution that specializes in serving SMEs. Several others, apart from the major commercial banks, lend to SMEs. These institutions, as the following shows, have not performed well in serving the sector.

### 1) Small Industrial Finance Corporation (SIFC)

The SIFC is very small in terms of assets, number of branches, and number of employees. All of the clientele of the SIFC are small manufacturers. It is hard to say, however, that SIFC is providing a significant complement to the role of commercial banks for SME

financing, because of the small scale of its lending. Credit analysis ability is not well developed and this shortcoming resulted in a considerable amount of non-performing loans.

This problem of non-performing loans is one restraint on new credit creation and was a major factor behind the decision of the board of directors in November 1998 to suspend making of new loans.

Other problems as the SIFC are a ban on borrowing from foreign (overseas) institutions, and difficulty in obtaining credit guarantees from the SICGC.

## 2) Industrial Finance Corporation of Thailand (IFCT)

There is recognition in the market that IFCT, considering its size, has contributed well to good quality long-term financing for industry. It is said that the bank's credit analysis ability is in the top rank in Thailand. The shortcoming is that the bank is oriented to medium-large scale companies. But the share of SME financing is only 22%. When the government offered Tier 1 and Tier 2 capital injections, the government requested IFCT to raise the percentage of SME financing in the total financing. The bank plans to increase the percentage to 30 in 1999 and to 50 in five years. However under present conditions it would be hard to expect significant change since the major shareholders of the bank are private sector companies and banks.

Problems within the IFCT, or situational conditions, that tend to restrict its performance as a supplier of credit to SMEs are as follows. IFCT had relied heavily on foreign loans for funding, and has suffered a great loss on the exchange rate. NOF will not cover these losses for the bank. Half of the 70% of IFCT equity held by the private sector is in foreign hands. Although this is a minor portion, it means some degree of influence on policy. The nature of IFCT ownership has remitted in a tendency to pay high dividends whereas annual surpluses might be used effectively by reinvestment. Moreover, the level of staffing and number of branches (23) are limited if a truly nationwide role serving the large number of SMEs is postulated.

### **3) Government Saving Bank (GSB)**

GSB has an adequate branch network (558) and employees (9,691). However the principal activity of GSB is to lend to public sector companies. The bank lacks know-how for the extensions of loans to SMEs. They have small exposure of loans to individuals (e.g., through mortgages) and micro enterprises.

### **(3) Actual Situation and Problems Faced by Borrowers**

#### **1) Lack of Business Related Information**

As described financial institutions are becoming less willing to take on credit risk. Under this situation, the requirements for the quality and amount of information from borrowers became very rigid and strong. Nevertheless, SMEs are lacking in general capability to prepare the information needed by financial institutions.

#### **2) Lack of Cash Flow and Collateral**

In general, SMEs have a short history and they are normally weak in terms of cash flow and collateral. In addition, to this situation, Thai banks are not accepting second-tier collateral.

As a result, once SMEs provide collateral, such as real estate, to one bank, they do not have any other collateral to get another financing. Even though market price of collateral is exceeding the loan amount, banks usually decline to provide additional loans based on such collateral.

## **2.2.4 SME Financing after the Economic Crisis**

### **(1) Problem Regarding Credit Guaranty System in Thailand for SME**

#### **1) Lack of Official Support for Credit Guaranty**

The Small Industry Credit Guaranty Corporation (SICGC) is the only institution which is providing credit guaranty services. SICGC started operations in February 1992. It is a quasi-public corporation, owned by commercial banks, MOF and governmental financial institutions. The initial capital was 400 million bahts and the capital has never been increased. This small scale of capitalization is a constraint to the supply of guarantees, as the SICGC makes its guarantees on the basis of its own

capital. Another constraint is the lack of a government support system, such as the credit insurance system of Japan.

Under these conditions, the following functions are recommended: (1) a credit guaranty system to facilitate loans to SMEs, and (2) a credit insurance system to support the credit guaranty system. These functions do not exist in Thailand.

## 2) Risk Exposure

In absolute terms, the capacity of the SIGC to guarantee loans is limited. The ownership of the SIGC also tends to be a restraint, as the commercial banks who are among the owners may take on double credit risk, providing loans and guaranties for them. There is little incentive for a commercial bank to utilize the services of SICGC due to this situation.

## 3) Problems Faced by the SICGC

The SICGC has suffered from significant increase in its Non-Performing Assets; around 65% of guaranties are said to be non-performing. The number of failures rose from 17 in 1995 to 22 in 1996 but then to 42 in 1997. Second, the SICGC now has no capability to provide new guaranties. According to the Act that founded the SICGC, three times of the equity amount was fixed as the ceiling for the total guaranty amount. This is low in absolute terms and also in view of prevailing financial circumstances within SICGC as well as the financial sector in general.

The total number of guaranties made in 1995 was 218; in 1996 there were 237, but in 1997 only 138.

From January to September 1998, total number of applications was only seven total (for B20 million). Thus, the SICGC has practically suspended operations.



## **2.3 The Present Condition and Problems of HRD In Thailand**

### **2.3.1 The Characteristics of Human Resources Development**

Thailand has produced agricultural products and exported it since the old days. To pay attention in the process that industrialization is promoted is the strengthening of the import substitution and the promotion of the export after the 1980's. However, this disclosed many structural subject at the same time. These are "Rise in the labor wages", "Lack of the infrastructure", and "Lack of the people who will be able to support the industrialization". These subjects have not been solved as a structural weak point, which Thailand has.

Human resources development (HRD) in Thailand has been done by two means, the knowledge education (formal education) and vocational training (non formal education). In knowledge education, emphasis is placed on learning of the fundamental knowledge. In vocational training, emphasis is placed on the acquisition of skills to pursue vocational training occupation. It does not, however, extend as far as the labor market where industrialization and is a driving force where the needs of enterprises are expressed. It is not the education for how to product goods, but education which only teaches the theory and structure of the thing and the training which only teaches the structure and how to repair it.

On the other hand, enterprises that manufacture industrial products having international competitiveness have carried out HRD activities on their own. Thus, in Thailand, there are two approaches in HRE, one of aims at "bottom up of knowledge and skill" and the other "attaining international competitiveness". In other words, there has been the existing of a dual structure in HRD. Economic crisis hit Thailand where such structural subjects haven't been solved.

In view of the above, the following study of HRD for industry first in Thailand takes as its starting point. "quantity," "the quality," and "mismatch with the needs of enterprise." Secondly, the present situation and trends of HRD and the modernization of management are examined. And finally we would like to discuss further subjects.

### 2.3.1.1 "Quality," and "Mismatch with the Needs of Enterprise" in HRD

Table 2.3-1 shows the shares of the Thai GDP by sector, the structure of employment, and educational background over the long run.

Table 2.3-1. Thai GDP Shares by Sector, the Structure of Employment, and Educational Background (%)

	1980	1985	1990	1995
<b>GDP</b>	100.0	100.0	100.0	100.0
Agriculture	23.2	15.9	12.5	11.0
Manufacturing	21.5	22.0	27.2	28.2
Wholesale & Retail	17.6	18.4	17.7	16.4
Service	14.0	14.5	13.4	12.7
Others	23.6	29.2	29.2	31.8
<b>Manufacturing</b>	100.0	100.0	100.0	100.0
Food, beverages & tobacco	25.2	29.0	19.3	16.4
Textile, apparel & shoes	22.5	23.2	24.7	22.6
Wooden products & furniture	7.1	4.6	5.1	3.6
Paper products & printing	3.0	2.9	2.2	2.7
Chemical & plastic products	6.3	5.9	5.1	5.3
Petroleum & non-metal production	12.7	11.7	10.4	11.9
Metal & metal processing	8.3	8.7	8.0	7.4
Machinery & electric equip.	5.3	7.3	11.0	15.7
Transport	7.7	4.9	9.9	8.6
Others	3.9	5.1	8.0	8.8
<b>Structure of employment</b>	100.0	100.0	100.0	100.0
Agriculture	70.8	68.4	64.0	53.3
Manufacturing	7.9	8.0	10.2	13.8
Wholesale & retail	8.5	9.2	9.6	12.7
Service	8.4	9.4	9.0	11.0
Others	4.4	5.0	6.3	9.2
<b>Educational background</b>	100.0	100.0	100.0	100.0
Elementary education	91.4	87.4	83.7	77.9
Secondary education	5.8	8.2	10.9	15.0
Higher education	1.1	2.0	3.6	5.1
Others	1.7	2.4	1.9	2.0

(Source): NSEDB, Ministry of Labour and Social Welfare;  
ADB, "Key Indicators of Asian and Caribbean Countries," 1996

Economic growth in terms of the GDP is characterized as follows.

- 1) to the extent that data for after 1980 is used, the share of agriculture is decreasing, and that of manufacturing is increasing.
- 2) Within manufacturing, the share of traditional labor-intensive industry is decreasing, and those of machinery & Electric equipment, and of

transport, are increasing. In the latter type of industry, there is participation by foreign capital and it includes the category of supporting industry.

The structure of employment, it is characterized as follows:

The share of agriculture is decreasing and those of manufacturing and services are increasing in the same way as the GDP ratio by sector.

Finally, the educational background of the population is as follows.

- 1) There has been a strong shift to the completion of secondary education, from the elementary level.
- 2) The increase in attainment of higher education has been slow. Here, higher education means technical college and beyond.
- 3) these characteristics suggest that the educational system may not have reacted quickly enough to the growth of demand for better educated workers needed for the advancement of industrialization, including a shift toward more technology-centered industry.

Table 2.3-2 shows the capacity of the undergraduate departments of technology in the Thai universities. Not all of those who receive an engineering degree enter manufacturing, so the actual supply of technical graduates is under 8,000 a year. This is a situation of under-supply.

Table 2.3-3 shows the destinations of graduates from the Department of Machinery, and Department of Electronics & Electricity in King Mongkut's Institute of Technology at Thonburi. Those who got a job in the sector other than their major is ascribed to the nature of the job market during the period of rapid economic growth starting in the mid-1990s. Anecdotal evidence indicates that many engineers entered the financial sector because of a wage differential prior to the financial crisis in 1997. The loss of engineers by the manufacturing sector due to this cause exacerbated the shortage of engineers in absolute terms. This was one of the short-term characteristics before the economic crisis.



Table 2.3-2. Capacity of the Undergraduate of Technology faculties in Thai Universities (1997)

National University	Persons	Private University	Persons
Chulalongkorn	725	Kasem Bundit	300
Kase	755	Mahanakom	350
Khon Kaen	300	Dhurakipunadit	100
Chiang Mai	230	Rangsit	500
Suranaree	240	Vongchavalitkul	200
Thammasat	330	Sripatum	400
Naresuan	70	Siam	150
Burapha	50	Thal Chamber of C.	240
Mahidol	240	East Asia	400
Srinakharinwirot	150	South-East Asia	100
Prince of Songkla	246		
Ubon Ratchathani	84		
KMIT, Ladkrabang	940		
KMIT, Thonburi	548		
KMIT, North Bangkok	190		
Rajamangala	160		
<b>Total</b>	<b>5,258</b>	<b>Total</b>	<b>2,740</b>

Table 2.3-3. The Destination of Graduates from Department of Machinery, and Department of Electronic & Electricity in King Mongkut's Institute of Technology, Thonburi (1992 - 1995)

Mechanical	1992	1993	1994	1995
Total number of graduates	96	102	105	127
Those entering graduate school	5	5	15	13
(Ratio %)	5.2%	4.9%	14.3%	10.2%
Those employed in related industry	77	67	76	85
(Ratio %)	80.2%	65.7%	72.4%	66.9%
Those employed in other sectors	14	30	14	29
(Ratio %)	14.6%	29.4%	13.3%	22.8%

Electronic & Electricity	1992	1993	1994	1995
Total number of graduates	119	105	88	144
Entering graduate school	4	6	6	5
(Ratio %)	3.4%	5.7%	6.8%	
3.47%				
Those employed in related industry	79	57	57	77
(Ratio %)	66.4%	54.3%	64.8%	53.5%
Those employed in other sector	36	42	25	62
(Ratio %)	30.3%	40.0%	28.4%	43.1%

Source: IDCJ Survey

Thai world competitiveness was very low as evaluated in "The World Competitiveness Yearbook" for 1996, on the following four points comparing with a neighboring countries: (1) conformity of the educational system with economic conditions, (2) rate of advancement to secondary education, (3) a high HRD Index, and (4) degree of difficulty of securing skilled labor.

These evaluations support the observation above that the purpose of the education and training still emphasizes elementary education and mere access to an occupational field. HRD was not recognized as a national project, and it is in a weak position Thai policy.

In part, this has its origin in Thailand's own national character. First, the commercial capitalism way of thinking is traditional. Second, interest in industry is weak. Third, too much importance is attached for the knowledge education, so that the educational system's products are mismatched with the needs of the industrial world. There is a more fundamental namely, fourth, the level of household cause to these, income is not high enough to give access to higher education to all those who want it. This is proven by popularity of night school, and the importance of financial aid for students.

It is pointed out the traditional attitudes and practices associated with cottage industry is a cause of the weakness of Thailand's competitiveness. They include weak awareness of the importance and nature of quantitative management techniques, and low productivity caused by negligence to production management techniques. These shortcomings obstruct the upgrading of technology and the attainment of international standards. Existing shortcomings such as many mind that are closed to modern management methods and practices such as disclosure of corporate information are barriers to the improvement of transparency of management and the clarification of, managerial responsibility.

### **2.3.2 The Present Situation of Human Resource Development**

The 8th 5-year National Economic and Social Development Plan for, that began in October, 1996 marks the first time the Thai Government treated HRD as an

extreme important subject. However, concrete action was not taken because the economic and financial crisis broke out right after this plan started.

The development of human resources in Thailand is accomplished by, (1) general education that is the concern of the Ministry of University Affairs and the Ministry of Education, (2) vocational education that is the concern of the Ministry of Education, (3) vocational training that is the concern of the Ministry of Labor and Social Welfare, and (4) vocational education and training that are the concern of several ministries and private institutions. In keeping with differences in the level of educational attainment of the population segments that are the objectives of these four areas of activity.

HRD in Thailand is biased towards book learning. Foreign manufacturers in Thailand say that international competitiveness. This has been the case in the vocational training and the skill training now offered is of no value in improving. Thailand for about 20 years.

A survey of the present condition of HRD in Thailand is as follows.

(1) National Economic and Social Development Plan

Technical and Vocational Education in Thailand (TVET), a plan by the Ministry of University Affairs, Ministry of Education and Ministry of Labor and Social Welfare, was formulated as part of the 7th 5-year National Economic and Social Development Plan that started in 1991. It provided for the following.

- 1) Swift increase in the supply of technicians for sectors where there are manpower shortages.
- 2) Cooperation between academic institutions and enterprises.
- 3) In school education, the improvement of correspondence courses and distance learning, the transferability of units, and the giving of credits for work experience, a transference to the educational world of the experience of the industrial world, and to make such a transference an ordinary part of the educational systems.

This has been materialized in the automotive industry. Cooperative arrangements now exist in the field of vocational education and training, between the Ministry of Education and Ministry of Labor and Social Welfare, Toyota Education and Training Center, and Toyota Motor Thailand Co., between Rajamangaia Institute of Technology Northeastern Campus and the Choonhavan Technology Training Center of Mitsubishi Motor Thailand Co., and between the Ministry of Education and Honda Motor Thailand Co. These are arrangements for middle management training and training for skilled workers. The 8th 5-year National Economic and Social Development Plan was started in 1996. Although HRD was assigned importance in it, the crisis right after the start of the plan, led to modification of the plan itself on two occasions and eventually to the Industrial Restructuring Plan. Thus, the recent change in economic conditions has had an impact on HRD.

(2) Current activity related to HRD, and modernization of management

1) Ministry of University Affairs and Ministry of Education

In addition to the public-private cooperative undertakings mentioned above, technical education for the teachers at local vocational training institutes has started as a cooperative project of the industrial sector and private institutions such as the Technology Promotion Association (Thailand-Japan).

2) Ministry of Labor and Social Welfare

Department of Skill Development (DSD) was transferred to the Ministry of Labor and Social Welfare in September 1993. DSD has continues to do vocational training at its National Institute for Skill Development and the 25 branches of the Regional Institute and Provincial Center for Skill Development. In recent years, pre-employment training and technical training have been started for the workers of private enterprise including foreign ones. As stated above, cooperation with the automotive industry is taking place. Occupational Skill Standards Promotion is a DSD activity whereby it awards skill certificates. This is called the National Skill Standards of Thailand. Certificates are awarded based on examinations after a training period of 6 months, for more than 100 skills. 82 skills will be added by 2000. However, this certificate does not have the same authority as similar certificates issued in many other countries. As for the level of the

skill, used in the system it is based on the level of developing countries where Thai workers were going as guest workers, and those recommended by the ILO. An agreement was made by Ministry of Labor and Social Welfare, Ministry of Industry and Ministry of Science, Technology and Environment on new standards for skill certification, in early 1999, but no further development has been announced yet.

3) Ministry of Industry and Ministry of Science, Technology and Environment

Ministries of Industry and Ministry of Science, Technology and Environment also have started a certification system. The Technology Promotion Association (Thailand-Japan) has been entrusted with this work and issues certificates for boiler operators and energy-use specialists and for licenses safety inspectors.

And, the training and education mainly related to machinery is being done by the Thai-German Institute of Technology that was established with German government support; this was begun in accordance with the entry of General Motors to the Thai automotive industry.

The Department of Industrial Promotion (DIP), Ministry of Industry, is engaged in activities for improvement of productivity. These activities are on behalf of the Thai industrial sector in general. A program to evaluate the management of SMEs related to supporting industry was started in 1998. The purpose of this program is as follows: (1) establishment of a way of to evaluate companies' ability to use the managerial and production control technique. (2) collection data, and (3) the training of evaluators. This program is Work Plan No. 1 in the IRP. As an IRP project it is being developed into the "Factory Evaluation System" and making of indexes and bench-marks.

The Entrepreneur Development Division of the Bureau of Industrial Enterprise Development (BIED) has been presenting programs such Personnel Management, Marketing Management, Production Management, Financial Management Factory Visit, Feasibility Study, and Business Establishment for managers of SMEs for over 20 years. The total number of persons who have

attended these programs has reached 2,000. Activities by an alumni association have begun. BIED will cooperate with ISMED.

#### 4) Cooperation between Academia and Industrial Sector

King Mongkut's Institute of Technology Thonburi (KMITT) has established a relationship with the industrial sector close through joint research, consultation activity, and testing of products as a service entrusted by TISI. KMITT had a plan for construction of an industrial park in the Bangkhunthien area using funds from the Ministry of Education (4,000 million baht), but, this plan has been interrupted by the economic crisis. The main activities of the university are the following.

- ① Joint research for a fee (a commission of 5% of sales goes to the university)
- ② Incubator support
- ③ Pilot plant management and training of the staff
- ④ Product testing service (for TISI)
- ⑤ Consultation for businesses (including the use of the university's facilities, marketing information, holding of the exhibition, help in obtaining finance)

The background for an engineering college to be involved in a business plan such as this is the high magnitude of the need to support small scale businesses and entrepreneurs. Less than one percent of Thai Manufacturers have in-house ability at mechanical drawing. They are very weak regarding the marketing and financial affairs. Similarly, King Mongkut's Institute of Technology North Bangkok (KMITNB) had planned a Technopreneur Development Program, but has not carried out the plan.

### 2.3.3 New Human Resources Development Activities

#### (1) Corporate Evaluation System

This proposed activity is based on Project No. 1 Development of Factory Evaluation System, in IRP Work Plan No. 1. The Team recommendation for concrete measures for realizing this, developed on the basis of the concepts embodied in the IRP, is provided as Project 2.1, details of which can be seen

in Annex III. The activities originated in a training program run by TPA in June of 1999, with BSID as the major implementing body. As trainers, ten Japanese experts, all accredited by Japan Ministry of International Trade and Industry as Registered Management Consultants, have been dispatched (as of September 1999).

The results of this dispatch of experts has been progress in the education and development of Thai persons holding certain qualifications in the analysis and evaluation of small and medium scale business. The objective at a higher level is, in the long term, for the graduates of this training course to contribute to the improvement of competitiveness of small and medium businesses through their analysis of prevailing conditions and problems at SMEs, evaluation of the SMEs according to specific and general parameters of specialized judgment, and offering of guidance or recommendations for improvements and problem solving. In the short term, it is intended that the dispatched experts and the trainees will, on the occasion of OJT provided by the Japanese experts, identify companies that are particularly promising and facilitate their access to bank finance.

Training course participants will be invited from governmental institutions, financial institutions, private corporations and the general public. Upon completion of training, all are expected to be officially certified as evaluators (consultants specializing in helping SMEs), and are expected to work as such at their original employers or even to go into business as independent consultants. Wherever they work, it is expected that they will play a valuable role in improving the international competitiveness of Thailand SMEs.

## (2) The Institute for Small and Medium Enterprise Development

The creation of the Institute for Small and Medium Enterprise Development (ISMED) began with the proposal made by Minister of Industry was approved by the Cabinet in April 1999 after which the Institute was officially established in July 1999. It is said that the Minister was inspired by the precedent of the Institute for Small Business Management and Technology of JSBC. Details about ISMED may be found in Annex III where the ISMED project itself is presented as Project 3.1, accompanied by Team recommendations.

It is a characteristic of this project that it is to be implemented with the cooperation of a network of eight universities led by Thammasat University. Activities are expected to be as follows, but not all of the final decisions have been made. Note that ISMED and the universities remain independent of each other. The cooperation is to be through the supply of instructors and making available facilities by the universities.

- 1) Education and training of SME owners and entrepreneurs
- 2) Advice and consulting regarding problems in SMEs
- 3) Studies, research, and supply of information
- 4) Development of evaluators, accountants, and SME advisers.

Of the above activities, the fourth item has been separated from the ISMED agenda for implementation by BSID, as mentioned above. The Team has already informally suggested to BSID that the activities of ISMED be defined so as to include training of officials employed by regional public entities and employees of industrial associations who are assigned to assisting and promoting SMEs. Their training should include matters related to national policy for SME promotion, existing systems for SME assistance, methods of diffusing knowledge, and so on. At present the human resources development related activities to be undertaken by ISMED comprise education and training of SME owners and managers, family business successors, and entrepreneurs. In addition, however, we note that the BIEND, that has accumulated much experience in these areas, is in a position to cooperate through the making available of education-related know-how and dispatch of trainers, but BIEND itself is not capable of expanding its education activities on a national scale.

#### **2.3.4 HRD Issues In the Context of Industrialization**

##### **(1) Points of the Issues**

Despite its rapid economic growth attained by industrialization, Thailand's HRD has continued to be based on a bottom-up educational and training system which aims to raise the levels of knowledge and skill of workers. HRD intended to improve the international competitiveness of Thai industry through training in practical techniques has been implemented with the support of foreign companies and development aid-supplying countries. Thus, there are two different forms of HRD in the country. This dual system has been in



place for more than 20 years. As a result, even today, when the entire industry is obliged to advance to higher levels in order to recover from effects of the economic crisis, the education and training of workers cannot readily meet the consequent demand. For the education of managers, one educational program of the Ministry of Industry is all that the Thai government offers now. This program is far from sufficient to advance the modernization of management on a nationwide basis.

HRD issues in Thailand can be summarized as follows.

- 1) It is necessary to develop human resources that satisfy the requirements of the industrial world.

Whether formal or informal, education closely related to the industrial world needed. In particular, in order to improve international competitiveness and meet international standards, much more than is being done at present by way of the development of human resources in terms of both quality and quantity is called for. This applies equally to the development of managers, or the education for modernization of management.

- 2) It is necessary to perceive specific needs of the industrial world from the following viewpoints.
  - Needs of industries which require improvement of basic technology
  - Needs of industries which are obliged to attain international standards
  - Needs of industries whose international competitiveness must be improved further
  - Needs of supporting industries
  - Needs of new businesses and entrepreneurs
  - Requirements for modernization of management

## (2) Further Direction

In view of the above, the development of human resources in Thailand will require the following viewpoint and specific measures.

- 1) Measures related to technology, production management and business administration techniques:

When the above diagnostic system is established, it will become possible to implement the following specific measures.

- Projects for improving the various types of business administration and production management techniques stated in the IRP
- Technical support based on international levels.
- Improvement of quality control
- Support for improvement of technical levels
- Technology transfer from LEs to SMEs
- Establishment of incubators and mechanisms for bringing together investors and companies seeking venture capital for SMEs
- Fostering of model enterprises

2) ISMED

Detail activity of ISMED is explained in ANNEX III.

3) Other HRD related matters

After ISMED is established, the following measures should be taken.

- a) Enactment of legislation on various qualification systems and establishment of certifying bodies for the promotion of SMEs
- b) Standardization of educational/training programs of public and private organizations which provide SMEs with education and training services
- c) Development of personnel who provide guidance in manager education, support to entrepreneurs, and engage in promotion of SMEs
- d) Human resource development activities for persons who work on the various IRP projects.



## **2.4 Institutional Building**

### **2.4.1 Background of the Concept for Institutional Building by MOI**

In January 1998, the Government of Thailand has announced Cabinet approval of the "Industrial Restructuring Plan, IRP" which had been proposed by the Ministry of Industry. The purpose of IRP is to cope with the Thai's economic recession through the improvement of Thailand's international competitiveness and export expansion, and the "Concept for Institutional Building" is one of the means to execute IRP's Action Plans.

The Ministry of Industry consists of six departments, including Office of the Permanent Secretary, OPS. Under MOI, there are three state enterprises and eight institutes as described above (refer to Figure 2.4-1).

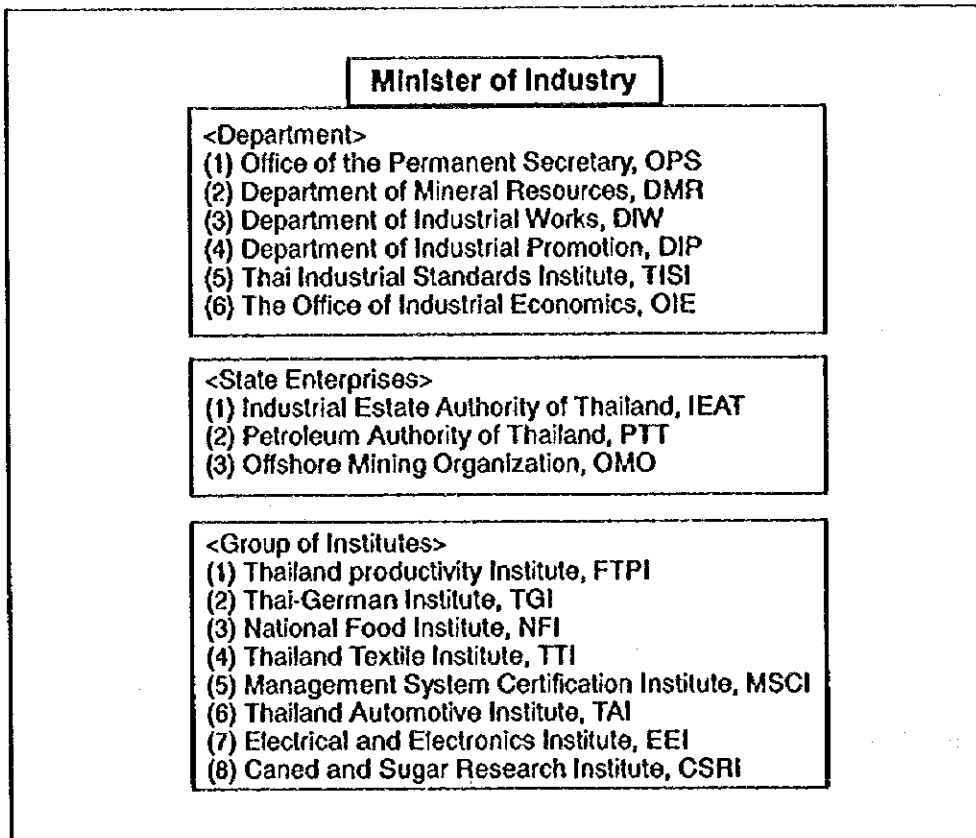
Although the MOI's main responsibilities are policy-making, budget allocation and monitoring, it is also deeply involved in service activities directly affecting the industries, such as research, inspection, testing and human resource development and training. In turn, the giving increasing attention to these activities, main responsibilities were somewhat left behind. In order to focus on the policy-making, budget planning and distribution and monitoring, the MOI has been promoting institution building in order to transfer some of the ministry's activities to those institutes, that are expected to work closely and effectively with private industry.

Concretely, traditional functions of the Thai Industrial Standards and Institute (TISI), such as product testing, inspection, product certification, quality system certification, and standards information services are now in the process of transferral to different institutes. In case of ISO 9000/14000 Certification, the Management System Certification Institute (MASCI) was established in March 1999 and is handling this work.

As a result, TISI will be limited to standards writing and work as the Accreditation Body for testing and calibration laboratories based on ISO/IEC Guide 25, which used to be the function of Office for National Accreditation Council. It would be essential to cooperate with the Ministry of Science,

Technology and Environment on technical points in terms of Accreditation of Laboratories.

Figure 2.4-1. Organization Chart of Ministry of Industry, MOI



## 2.4.2 Establishment of Thailand Automotive Institute (TAI) & Electrical and Electronics Institute (EEI)

### (1) Background

The Cabinet approval was announced for this year's budget allocation for Thailand Automotive Institute and Electrical and Electronics Institute in July 1998. Also, 5 years of budget support (1999-2003) was approved by the government. However it is expected that both institutes will become financially independent, strengthening their function, organization, personnel and equipment after these five years. Both institutes are now in the process of starting their activities.

## **(2) Core functions of the institutes**

At the outset the core functions of the institutes had not been sharply defined. With the purpose of proposing specific roles that should be taken by the institutes, the Team held a Project Cycle (PCM) Workshop. Details of the results of the Workshop are provided in Annex I. Given below are the proposed specific core functions, based on the Team's studies and analysis, including the Workshop. Each institute, in the considered opinion of the Team, should have four core functions refer to Fig. 2.4-2).

### **1) Policy Making Support and Coordination**

- Recommendation for R&D policy and for industrial policy
- Coordination between the private sector and government
- Coordination among institutes
- Coordination with institutes in overseas countries which are dedicated to similar activities
- Information collection, analysis and publication services

### **2) Testing Services and Products Certification**

- Product certification and testing based on TISI standards
- Product certification and testing to support exports
- Testing and calibration services for measurement equipment

### **3) System Development and Human Resource Training for the Development of Technology and Certification and Accreditation**

#### **Quality System Management and Certification**

- To support the development of manufacturers to be competitive in international market
- Consulting services to assist companies to get ISO 9000/14000 certification
- Support and promote good performance companies, like the Malcolm Baldrige National Quality Award, and Business Management Award in Japan.

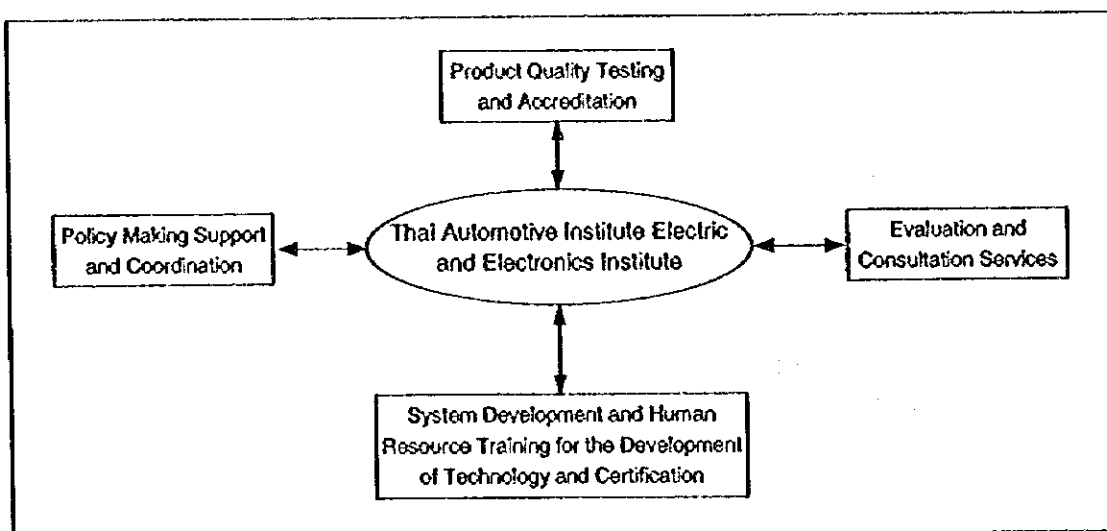
### Technology Development

- Introduction systems that promote technological development, like an awards program
- Holding seminars and human resources development programs
- Coordination with other institutes

#### 4) Evaluation and Consultation Services

- Consultation Services and evaluation of factory operation, enterprises etc.
- Comparison with companies in other countries
- Suggestion System by expert sending to companies and it's follow up
- Data base establishment and up-date system about available experts

Figure 2.4-2. Four Main Functions of Institutes



### (3) Requisites for Support for the Activities of the Institutes

#### 1) Positive support from industries

Based on the experiences of existing institutes, the original intention of institutes to support the industries has not been well executed. The first step could be to clarify the demand of large scale companies to try to involve them much more in the activities of institutes. This will improve the ability of the institutes to support SMEs.

## 2) Harmonization with international standards

It is essential to harmonize domestic standards with international standards in order to be competitive in the international market. Product certificates and a quality system management certification system are among the principal activities of the institutes. However, the harmonization of the certification system is not satisfactory from an international viewpoint. There is a possibility that the certification system of Thailand as it now is will be not be accepted in international market.

To improve this situation, the following measures are recommended.

### Short Term Measures

- Accreditation of Laboratories of each Institute under ISO Guide 25 by TISI
- In addition to above accreditation, each Institute should try to be accredited by overseas accreditation bodies, such as NATA (Australia), NVLAP (USA)

### Long Term Measures

- Establishment of a Traceability System in Thailand
- Coordination with NIMT (National Institute of Metrology Thailand)
- Effort to make mutual recognition agreement between accreditation bodies, like TISI and overseas accreditation bodies

#### 2.4.2.1 Thailand Automotive Institute (TAI)

Through discussions with the Thailand Automotive Institute, the Team proposals for the broad features of the Institute were determined to be as follows. Details are in Annex III under the section for Project S.1.

##### (1) Purpose of Establishment of TAI

The Thailand Automotive Institute was established under the MOI as a public entity in July 1998, with the fundamental objective of improving the competitiveness of the automotive industry. It was given a budget allocation in fiscal 1998 of 16 million bahts and has the following assigned functions.



- Testing and inspection (through transfer to the TAI of TISI functions) of motor vehicles, their parts and materials used to make them.
- Measurement of exhaust emissions.
- Safety testing.
- Product inspection.
- Materials inspection.
- Dissemination of information and supply of technical guidance and training in order to raise the automotive industry to the level of world standards.
- Formation of a scheme for cooperation and coordination by the government and private sector and by Thai interests and foreign interests.
- Research and study on automotive matters in order to develop policy for promotion of the Thai automotive industry, as well as recommendable strategy and development planning for the industry.

## **(2) Organizational Plan**

Mr. Padetpai, Deputy Secretary of MOI, had been Executive Director but was succeeded by Mr. Alongkot Chutinan from the Siam Cement Public Company Ltd. from February 1999. The Board of TAI is composed of 19 members who represent industries, related entities, academia and MOI (refer to Figure 2.4-3).

## **(3) Functions of TAI**

For the details of proposed TAI activities, please refer to Annex III.

### **1) Policy Making Support**

To promote the automotive industry, the Ministry of Industry needs all sorts of research and survey work for the policy making process. TAI will conduct research and survey assignments from MOI, such as these:

- Automotive and auto-parts sector studies
- Policy recommendation studies
- Specific sector studies
- Voluntary and compulsory standards development with Thai Industrial Standards Institute, TISI

**2) Information Services**

TAI is to provide all sorts of information such as market and technology information through their publications and database. Services will include:

- Development of a database for automotive and auto-parts industry
- Publication of data and data analysis
- Publication of sector studies
- Publication of periodical sector news
- Development of a database for consultants

**3) Testing and Certification Services**

TAI provides testing and certification services in order to contribute to the improvement of consumer protection in the domestic market and to upgrade the Thai automotive and auto-parts competitiveness. Services are to comprise:

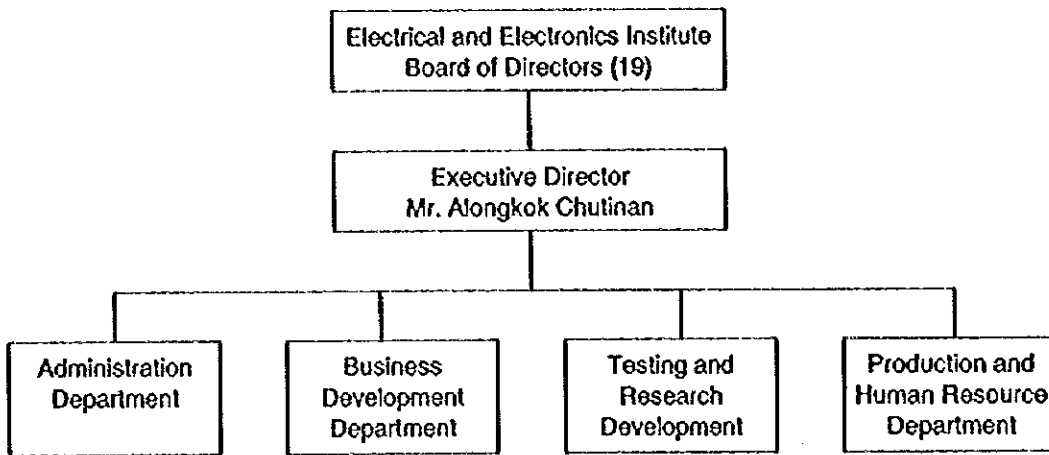
- Safety testing and certification
- Emission testing and certification
- Testing for importing products and parts based on TISI standards
- Testing for exporting products and parts based on counter part standards

**4) Consultation Services**

TAI will use its consultants data base to select the most appropriate expert to dispatch for technology improvement, administrative and management skills improvement. Services will include:

- Factory-clinic services
- R&D supporting services for SMEs
- Intermediary services to other existing institutes

Figure 2.4-3. TAI Organization Chart



#### 2.4.2.2 Electrical and Electronics Institute

Through discussions with the Electrical and Electronic Institute, the Team proposals for the broad features of the Institute were determined to be as follows. Details are in Annex III under the section for Project S.2.

##### (1) Purpose of Establishment of EEI

EEI is an independent, non-profit organization under the Industrial Development Foundation, Ministry of Industry, and was established in July 1998. It has the objective to strengthen the competitiveness of the Thai electrical and electronics industry in the international market.

The budget for the first year beginning August 1998 was 14 million bahts. The initial responsibilities when EEI was established were as follows:

- ① Provides quality, safety and environmental testing for electrical and electronic products.
- ② Provides information on production technology, and trade.
- ③ Coordinates and cooperates with the governmental and private sectors at both domestic and international levels to develop the industry and its related businesses as well as to improve knowledge and skills of the workforce.

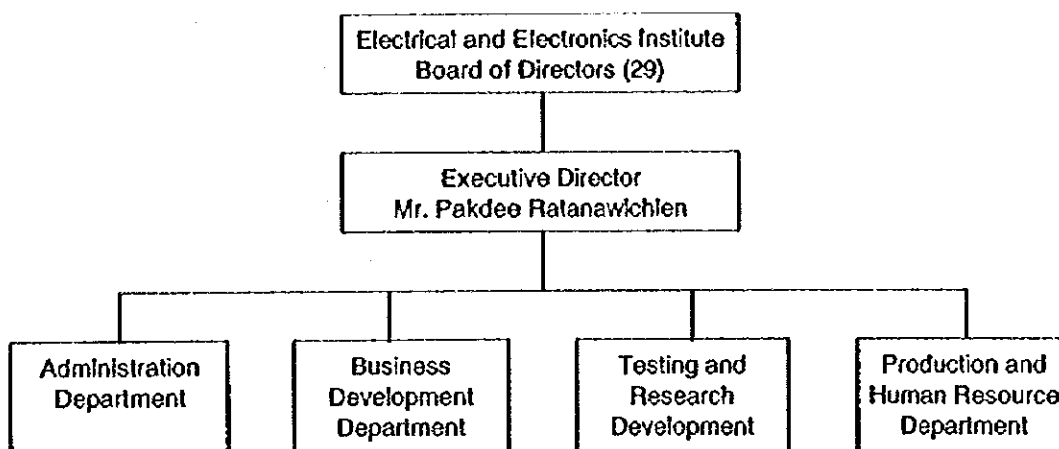
- ④ Conducts studies in order to make recommendations on policies, plans and measures for developing and solving problems of the industry.

(2) Organizational Plan

As at the TAI, Mr. Padetpai of MOI had been General Director, after which Mr. Pakdee Ratanawichien from the Siam Cement Public Company Ltd. was selected for the of General Director.

The board is composed of 29 members who represent industrial association, related entities and MOI (see Figure 2.4-4).

Figure 2.4-4. EEI Organization Chart



(3) Functions of EEI :

For the details of proposed EEI activities, please refer to Annex III.

1) Policy Making Support

To promote the electrical and electronics industry, the Ministry of Industry needs all sorts of research and survey for their policy making process. EEI will undertake research and survey commissioned by MOI.

- Electrical and electronics sector studies
- Policy recommendation studies
- Specific sector studies

- Voluntary and compulsory standards development with Thai Industrial Standards Institute, TISI

## 2) Information Services

EI provides all sorts of information such as market and technology information through their publications and database.

- Development of database for electrical and electronics companies
- Publication of data and data analysis
- Publication of sector studies
- Publication of periodical sector news
- Development of data base for consultants

## 3) Testing and Certification Services

EI provides testing and certification services in order to contribute to improvement of consumer protection for domestic market and to upgrade the Thai electrical and electronics industries' competitiveness. It does:

- Safety testing and certification based on TISI standards
- Compulsory standards testing based on TISI standards
- Voluntary standards testing based on TISI and counter-part standards
- CE-Marking test

## 4) Consultation Services

EI uses its consultants database to select and dispatch the most appropriate expert for technology improvement, administrative and management skills improvement in order to upgrade the industry as international standards level. It provides:

- Factory-clinic services
- Intermediary services to other existing institutes

### 2.4.3 SMEs Development Institute (ISMED)

#### (1) Background

Development of SMEs relies greatly on qualities of the enterprises' managers. However, those qualities are not improved easily. Furthermore, it is said that the modernization of the SMEs is fulfilled by replacement of the new

enterprise. Strengthening of the SMEs management will pay attention here. Establishment plan for Institute for SMEs Development (ISMED) is one of important and concrete signs by Thai government.

The Minister announced plans for ISMED on March 2, 1999 and concrete details were announced by Thammasat University on March 10.

The Minister of the Ministry of Industry, showed interest in Japanese SMEs promotion policy and training activity by the Japan Small Business Corporation when he visited Japan. After returning to Thailand, he thought of establishing an institution like that. A plan was to that effect offered to the Cabinet and approved in April 1999 and preparations began June 1999.

## **(2) Purpose**

ISMED was jointly established by Department of Industrial Promotion, Ministry of Industry, and Thammasat University. It is in an independent foundation that will interact with concerned parts of both the government and private sectors throughout the country. It seeks to help the SMEs of all sectors through diffusion of owners, technology and the knowledge about management.

The specific purpose of ISMED is to train and assist the managers, second-generation business owners, provincial administrative officials and new entrepreneurs. It is to undertake the following specific work.

- 1) Increase knowledge and managerial skills in existing SMEs, and help new entrepreneurs.**
- 2) Improvement of institutional management of training, e.g., the improvement of the methods, and equipment as well as research support, for the education and training program.**
- 3) Development of a nation-wide system to support educational programs and management for SMEs**

### **(3) Organization**

The Secretary General of the Ministry of Industry is a chairperson of ISMED's management board. And the Asian Convention Center in Thammasart University at Rangsit will be used as a general office for ISMED. A network of eight universities has been formed, with the general office in Thammasart University at the center. The universities are:

Thammasart University  
Chiangmai University  
Naresuan University  
Suranari University of Technology  
Khon Kaen University  
Cadet Academy  
Burapha University  
Prince of Songkla University

### **(4) Main Activities**

- 1) Education and training of SMEs managers and budding entrepreneurs.
- 2) Advice and consultation for SMEs.
- 3) Research, studies and information services.
- 4) Training for persons who want to be, accountants, advisors for SMEs and the issuing of qualification certificates to them.

To train SME Diagnosticians (Japanese MITI registered Management Consultant) is one of its activities. It is very similar to the Factory Evaluation System in the IRP. However, the Factory Evaluation System included into IRP has been planned as one project that is was independent project before the ISMED plan came out. Factory Evaluator Training was decided to be handled by the Factory Evaluation System Committee in March, 1999 as an activity that was separated from ISMED's activity.

### **(5) Management Plan**

A 5-year business plan was announced along with a plan for urgent, and medium- and long-term activities. As its capital, ISMED will seek through a government budget allocation, the SMEs Fund which will be set up under the

SMEs Promotion Act, contributions from the private sector, support from foreign countries, and its business income. A government allocation of 864 million bahts was decided in FY 1999.

**(6) The present condition and subject**

Actual activities have just started with the two-day training course, "Tactics to build SMEs Business," on June 18. Both short and long-term training programs are being planned.

The future activities of ISMED could be evaluated by the following three criteria.

- 1) Number of trainees and enterprises assisted
- 2) Appropriateness and effectiveness of the courses
- 3) Number of new businesses started by graduates

A government budget allocation was secured for the first year in spite of ISMED's being a foundation. The funds are for the preparation for the establishment of the business. Private contribution, trust money, support money, the SMEs fund and business income will be the main sources of revenue for the activities after the second year.

It has the following strengths.

- 1) It utilizes an existent institution that has know how and facility to train the person
- 2) Cooperation of BIED
- 3) Support is available through the governmental budget of IRP and foreign ODA
- 4) Support is possible on the basis of the SMEs Promotion Act

ISMED faces the following two challenges:

- Lack of awareness of ISMED
- Whether there is sufficient demand in Thailand for what it intends to do. Managers of SMEs are not aware of the importance of management.



## **2.4.4 Current Situation and Problems of Analogous Institutions In Thailand**

### **2.4.4.1 Thailand Productivity Institute, FTPI**

**(1) Name of Institution: The Thailand Productivity Institute, FTPI**

**(2) Address: 19th Floor, Boonpong Tower,  
1193 Paholyothin Road, Bangkok 10400  
Tel: (662) 271-4033-43 Fax: (662) 271-3005, 271-3007**

**(3) Mission**

The following are the mission of FTPI, concentrating into five areas;

- ISO 9000, 14000 related consultation,
- KAIZEN type of improvement
- Improvement of machinery utilization
- Production process improvement
- Human resources management

**(4) Current Situation and Problems**

FTPI originated as the Productivity Division of DIP. The board members of FTPI are the representatives of academia, government, entrepreneurs and workers. Board member. This is different from the situation as TAI and EEI where board members are from private sector companies.

Their client base is 1,000 members and the future target is around 2,500 members. Most members are medium size companies and 100% pure Thai-owned.

FTPI uses 150 consultants, among which 80 are permanent employees, Consultation fees is from 10,000 to 15,000 bahts/Man-Day.

Originally, FTPI was recommended to concentrate on profit-oriented activities, such as consultation. In practice, the main activities concentrate on the activities in the public interest, such as human resources development,

publication and productivity improvement. One problem that has been identified is that FTPI is not responding to the demand from the industry since the demand is so strong and wide. It can be pointed out that it would be more effective to consider instructors training than direct consulting to companies.

**(5) Plan of Personnel and Budget**

<u>Year</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>
Number of personnel	157	200	250
Budget (million bahts)	185	200	240

Among total personnel, 20% as supporting staff. Government budget support of 100 million bahts per year is guaranteed for seven years from the establishment. In addition to this 100 million bahts, 400 million bahts was added for advertisement costs. FTPI is expected to be financially independent within two years.

**(6) Future Expansion Plan**

- Increase client base to 2,500 companies
- Expansion of services to SMEs
- ISO 9000/14000 & QS 9000 related services
- Demand development through aggressive advertisement and efforts towards financial independence

**(7) Expectations toward Japan**

JICA provided follow-up technical cooperation by dispatching four experts since February 18, 1999. TPI has great expectations regarding technology transfer from JICA experts in the field of productivity consulting technology, HRD and personnel affairs control, etc. The follow-up technical cooperation will be continued until February of 2001.

**2.4.4.2 Thai-German Institute, TGI**

**(1) Name of Institution: Thai-German Institute**

(2) Address: 700/1 Bangpakong Industrial Park II Bangna-Trad Rd.,  
Tambol Klong Tamru, Muang District, Chonburi 20000  
Tel: (6638) 215-033~44 (ext.1001) Fax: 038-743-467

(3) Mission

In January 1995, Cabinet approval was announced for the establishment of TGI. TGI started operation in February 1998 based on the support from Government of Germany. The mission is the transfer of well-advanced German production technology and technical training. The following three areas are of major importance at TGI.

- Automation Technology
- Technology of CNC/CAD/CAM
- Casting & Engineering Work

First Phase (From 1995-1999)

Land		Thai Government
Building		Thai Government
Equipment	Bt.200 Million	Thai Government
Operating Cost	Bt.300 Million/annual	Thai Government (for 10 years)
Set up Cost	DM.20 Million	German Government
Training Cost	DM.10 Million/annual	German Government (4 years)

Total Investment in 1995: Bt.1 Billion

(4) Current Situation and Problems

TGI has a training facility which has capacity for 3,000 trainees. The utilization rate however is only 10%. The break-even point for the TGI facility is around 1,000 trainees per year. In 1999 TGI expects around 800 trainees, it had 400 in 1998. The average term of training is 5 days and training fee is from 3,000 to 19,000 bahts.

The reason for the low usage of the TGI facility is a matter of the attitude of Thai business owners who prefer to not invest in employee training. It can be

pointed out that efforts to change this attitude of entrepreneurs would be necessary.

**(5) Budget and Personnel Plan**

The federal Government of Germany is assuming the total cost of 5 experts who work at TGI. The German Government also sometimes supports short-term dispatch of experts. There are around 75 Thai staffs, the majority being engineers. Thai Government support is guaranteed for 10 years from the establishment and it expects TGI to be independent after that.

**(6) Future Expansion Plan**

It is expected to utilize the facility of TGI as much as possible. In order to achieve such purpose, awareness building in the business community would be necessary. Also it would be important to promote the necessity of testing and calibration services in order to increase competitiveness for the industrial sector.

**(7) Expectation toward Japan**

There is no specific demand or expectation at this moment since TGI is well supported by German Government.

**2.4.4.3 National Food Institute, NFI**

**(1) Name of Institution: National Food Institute**

**(2) Address:** 185 Charunsanitwong Soi 40 Bangyeekhan,  
Banglad Bangkok 10700  
Tel: (662) 435-0203-5 Ext. 302, Fax: (662) 435-0206

**(3) Mission**

The cabinet approval for NFI establishment was announced in October 1996. The following four roles are the main activities of NFI.

- Information Collection, Analysis and Distribution
- Research on Foods and Food Inspection
- Research and Development on food products and packaging
- Support for Quality System Improvement

**(4) Actual Situation and Problems**

Part of TISI Bampoo's testing equipment were transferred to NFI. Food industry demand for NFI's activities is strong. However, the Food Industry Association is not very supportive of the activities of NFI. Because of this situation, NFI lacks financial resources and human resources. Therefore the actual activities of NFI have been concentrated on the coordination of industry and government, which is not a good response to the needs of industry. It could be considered that demand on food testing services would be strong and equipment and human resources should be strengthened.

**(5) Budget and Personnel Plan**

<u>Year</u>	<u>1999</u>	<u>2002</u>
Personnel	56	72
Budget (Million Bahts)	50	50

The Thai Government will support to NFI for the initial phase, until 2003. This means NFI is expected to be independent financially from 2004. Also the government budget allocation will not be increase to above 50 million bahts. Therefore, it would be hard for NFI to increase the number of its personnel. Under this condition, NFI is seeking possibility of utilizing the services of other institutes.

**(6) Future Expansion Plan**

It is expected that NFI's testing services level will be at a level which could be accepted internationally. That will also increase the demand to TFI from the industry. Also NFI has a plan to concentrate on an advanced technology area, such as bio-technology.

**(7) Expectations toward Japan**

TFI is expecting support from Japan for equipment modernization and human resources training.

#### **2.4.4.4 Thailand Textile Institutes, TTI**

**(1) Name of Institution: Thailand Textile Institute**

**(2) Address: Textile Industry Division Building, Soi Trimitr,  
Rama 4 Road, Klong-Toey, Bangkok, 10110 Thailand  
Tel: (662) 390-2337, 712-1592, Fax (662) 772-1593**

**(3) Mission**

The following are the principal mission of TTI:

- Support the development of textile industry according to a five year planning
- Coordination of textile industries and government (textile industries mean chemical textile, cotton, garments and coloring)
- Execution of Five Year plan and its follow-up

**(4) Current Situation and Problems to be solved**

MOI approved establishment of TTI in October 1996 and it started operation in June 1997 with 3 persons. JICA supported its operations. Activities are concentrated in the coordination of industries, and testing and inspection services. TTI is not satisfying the expectation of textile industries in regard to coordination due to the deteriorated situation of textile industries themselves. It is expected that TTI will contribute to transformation of the industries from being cheap labor oriented to production of high value added goods.

The following are the principal activities expected from industries;

- ① Data base service
- ② Training and consulting
- ③ Coordination
- ④ Price fixing
- ⑤ Export support (financing)
- ⑥ Support for legal issues

**(5) Plan for Budget and Personnel**

TTI plans to have a staff of 19 in 1999 and 28 in 2000. If they add the function of testing, 2 more persons will be added. The budget was not disclosed but it can be imagined that they do not have enough funds. Also, TTI is expected to be independent financially in 2001. However such a possibility seems to be low.

**(6) Future expansion plan**

- ① Harmonization of their testing services and results to be recognized internationally
- ② Development of own brands
- ③ High value adding
- ④ Establishment of a network with overseas textile associations and technological network
- ⑤ Human resources development
- ⑥ Modernization of equipment

**(7) Expectation toward Japan**

TTI is now learning finishing processes and coloring from Italian experts. For some specific areas, they want to have some technical cooperation from Japan.

**2.4.4.5 The Management System Certificate Institute, MSCI**

**(1) Name of Institution: The Management System Certificate Institute, MASCI**

**(2) Address: Rama 6 St. Ratchathewee, Bangkok 10400**  
**Tel: (662) 247-9912**

**(3) Mission of MSCI**

The following 5 activities are the principal mission of MSCI.

- Certification Services of ISO 9000, ISO 14000, TISI 18000 and other quality system.
- Monitoring of certified companies
- Training of assessors of ISO 9000/14000 and TISI 18000

- Participation for the regional and international meeting and forum about quality system and standards
- Coordination between the industrial sector and government

**(4) Current situation and problems to be solved**

MASCI is the institution which assumed the role of certification of ISO 9000/14000 and assessors from the Thai Industrial Standards Institute. Cabinet approval of the establishment on MASCI was announced in October 1997. MASCI started operation in September 1998. Actual certification services started from June 1999.

**2.4.5 Way of Coordination Among Institutes**

**2.4.5.1 Classification of Institutes Based on their Establishment**

The seven institutes under the Ministry of Industry (TGI, FTPI, NFI, MSCl, TTI, TAI and EEI) have been keen on coordination with each other, and the heads of the institutes meet once in a month exchange information. Among them some are ready to and have agreed to open their clients database to other institutes to help the latter develop a solid client network. Since each institute has its own advantage and specialization depending on its mission and capability, however, the potential of such efforts may be limited. On the other hand, some of the activities of EEI and TAI has a close relationship with or duplicate those of the Thailand Productivity Institute, the Thai-German Institute and ISMED. In order to satisfy the client demand and maximize their capability, coordination among the institutes is advisable.

Depending on the purpose of their establishment the existing institutes including private, government and public are classified as follows;

**(1) Specific sector targeted**

- Electrical and Electronics Institute
- Thailand Automotive Institute
- National Food Institute
- Thailand Textile Institute



**(2) Productivity and management improvement**

- Bureau of Supporting Industry Department
- Thailand Productivity Institute
- Thai-German Institute
- The Management System Certificate Institute
- Institute for SMEs Development

**(3) Testing, calibration and product certification services**

- Thai Industrial Standards Institute, (MOI)
- National Institute for Metrology (Thailand), (MSTE)
- Thailand Institute of Scientific and Technological Research, (MSTR)
- Technology Promotion Institute

**(4) Policy support and recommendation and studies**

- Thailand Development Research Institute

**2.4.5.2 Activities of Institutes and Coordination**

**(1) Necessity for coordination of activities**

There are now eight institutes under MOI and it is expected that more will be created. It is not necessary for all institutes to cooperate with each other or for any given institute to cooperate with a number of other institutes, but those institutes having the same or similar activities should cooperate with each other. This section examines the desirable direction for such cooperation.

Table 2.4-1 shows the activities of the institutes engaged in industrial promotion according to the following five-part classification of functions. As a matter of course any given institute will have more than one of the following.

- 1) Policymaking support
- 2) Information services
- 3) Testing and certification services
- 4) Technical guidance
- 5) Human resources development

Table 2.4-2 subdivides these five functions into component Activities and the Activities were classified into categories of those with high need for coordination or cooperation between institutes and those for which there would be low need. The criteria for judging necessity were the following three; when it was judged that there is low need for cooperation on the part of the other institute, the Activity was eliminated.

- 1) No close relation between the industries of the two.
- 2) Institute is highly specialized.
- 3) Some necessity is recognized, but conditions 1 and 2 above override it in importance.

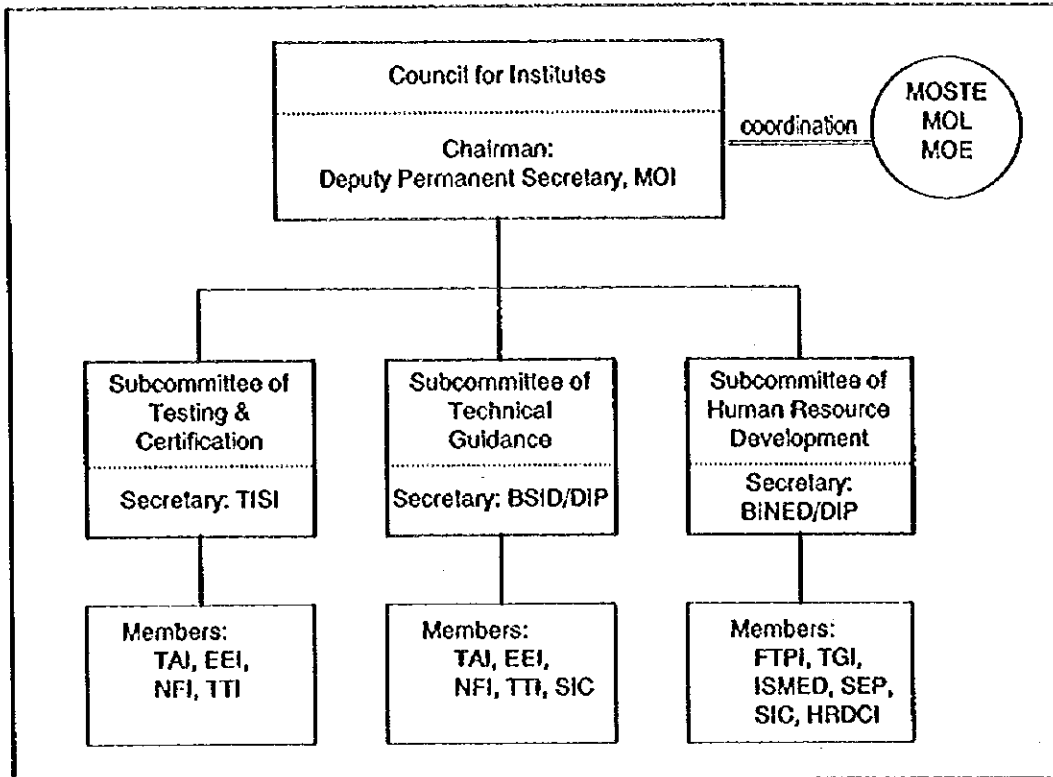
The Team determined by means of the screening using these criteria that, as shown in Table 2.4-2, that there are three functions where coordination is required.

- Testing and Certification
- Technical Guidance
- Human resource Development

## (2) Mechanisms for inter-institute coordination

A classification of projects related to either the seven MOI institutes (excluding SCRI) or to institutional functions, according to the above three functions, is provided as Table 2.4-3. There are three projects having institutional functions, the SIC and CEP projects of the BSID and the Human Resources Development Centers for Industry project of the Industrial Estate Authority. As can be seen from the table, these institutes are relatively new and are not yet functioning to the fullest extent intended. The institutes are presently under the administrative control of Deputy Permanent Secretaries of the MOI. Because of the importance of coordination by the institutes the Team recommends that a Council for Institutes to be established for the purpose and be under the control of a Deputy Permanent Secretary. The Council would have three subcommittees, for testing and certification, technical guidance, and human resources development. The scheme would be as shown in Figure 2.4-5.

Figure 2.4-5. Organization for Coordination of Institutes and Similar Organization



The tasks of the Council would be these:

- 1) Coordination with other ministries and departments of the government, especially on behalf of a workable, continuing scheme for institutes or other entities related to the above but administratively controlled by MOSTE, MOLSW, and MOE.
- 2) Facilitating matters related to sharing the facilities, equipment and personnel of MOI-affiliated institutes.
- 3) Development of joint service-supplying activities so that a private firm can accomplish multiple objectives by a single visit to an institute.
- 4) Joint efforts for improvement of educational curricula and educational facilities.
- 5) Working on behalf of sustained, successful operation of the institutes through representing them to the rest of the government.

If necessary, arrangements should be made for the use of institute membership fees and the SME Promotion Fund in order to finance activities.

Table 2.4-1. Activities of Institutions

Function	Policy Making Support			Information Services		Testing and Certification Services			Technical Guidance				Human Resources Development					
	Policy Recommendation Studies	Sector Studies	Standards Development	Internal and International Coordination	Data Base Development	Information Publication	For Domestic Products	For Export Products	Calibration Services	Accreditation Services	Factory Evaluation	On-site Technical Guidance	Consultation for ISO 9000 etc.	Training for Productivity Improvement	Training for TQM/ISO	Training for Technology up-grading	Training for Management	Official Approval for Qualification
EEI	○	○	○	○	○	○	○	○			○			○				
TAI	○	○	○	○	○	○	○	○			○			○				
NFI	○	○	○		○	○	○							○		○		
TTI	○	○	○	○			○								○	○		
FTPI					○								●	○	○	○		
TGI														○		○		
MASCI	○	●								○			●		○			●
ISMED	○	○		○	○	○					○			○			○	○
TPI				●	○	●	○							○	●	●	○	●
TISI			●	●			●											
NIMT				○		○			●	○								
TDRI	●	○		○	○	○												
TISTR			●	●		●			●	●					●	●		
OCS							○											
BSID	●	●			●	●					●	○		●		○		○
HRDCI																○	○	

● = Ongoing Activities ○ = Planned Future Activities

- MOI: Ministry of Industry
- EEI: Electrical and Electronics Institute
- TAI: Thailand Automotive Institute
- NFI: National Food Institute
- TTI: Thailand Textile Institute
- FTPI: Thailand Productivity Institute
- TGI: Thai-German Institute
- MASCI: The Management System Certificate Institute
- ISMED: Institute for SMEs Development
- TPI: Technology Promotion Institute
- TISI: Thai Industrial Standards Institute, MOI
- NIMT: National Institute of Metrology (Thailand)
- TDRI: Thailand Development Research Institute
- TISTR: Thailand Institute of Scientific and Technological Research, TISTR
- OCS: Office of Commodity Standards, Department of Foreign Trade, Ministry of Commerce
- BSID: Bureau of Supporting Industry Department, MOI
- HRDCI: Human resource Development Center for Industry, IEAT

Table 2.4-2. Coordination among Institutions

Conceptual Function	Activities	Level of Necessity	Not Necessary	Reason
Policy Making Support	Policy Recommendation Studies		*	Sector oriented
	Sector Studies		*	Sector oriented
	Standards Development		*	Sector oriented
Information Services	Intamal & International Coordination	3		
	Data Base Development		*	Sector oriented
	Information Publication	3		
Testing & Certification Services	For Domestic Products	1		
	For Export Products	1		
	Calibration Services	1		
	Accreditation Services		*	Sole function
Technical Guidance	Factory Evaluation	1		
	On-site Technical Guidance	1		
	Consultation for ISO 9000 etc.	1		
	Training for Productivity Improvement	1		
Human Resources Development	Training for TOM/ISO	1		
	Training for Technology Up-grading	1		
	Training for Management	1		
	Official Approval for Qualification		*	Function oriented

Note: Necessary Level

1= Very Important

2= Important

3= Not so important but necessary

Sector Oriented = Sector Specific Activities

Function Oriented = it would be good to have various institutes or organizations to offer opportunities to the public for specific function, such as issue oriented training & consultation.

Table 2.4-3. Main Roles of MOI related Institutes

---

**A. Testing and certification services**

**TISI** : Testing, certification and accreditation

**NFI** : Testing and certification of food products (\*)

**TII** : Testing and certification of textile products (\*)

**TAI** : Testing and certification of automobiles and their parts (\*)

**EEL** : Testing and certification of electrical and electronics appliances and their parts (\*)

**B. Technical Guidance**

**EEL** : On-site technical guidance to electrical and electronics parts suppliers (\*)

**TAI** : On-site technical guidance to automotive parts suppliers (\*)

**SIC<sup>1)</sup>**: Technical guidance to metalworking and plastic processing industries

**C. Human resource development**

**FTPI** : Training for improvement of productivity (KAIZEN)

**TGI** : Training of factory automation technology

**CEP<sup>2)</sup>** : Fostering of certified management advisors (\*)

**ISMED** : Education and training of entrepreneur and management (\*)

**HRDCI<sup>3)</sup>** : Vocational training within industrial estates (\*)

---

**(Note):**

1) assumes a combined function of old MIDI and Supporting Industry Center (SIC) that is under construction as a facility of BSID.

2) means the Corporate Evaluation System Production being carried out under BSID.

3) Human resource Development Center for Industry being planned in two industrial estates of IEAT by the OECF yen credit.

(\*) means those functions which under planning or just started.

## **2.4.6 Operation of Institutions and JICA Cooperation**

As stated above, MOI, in addition to working for a smaller government by transferring functions to institutes that in time are to become self-supporting, is attempting to promote industrial growth and development by the formation of institutes. This means the work of the government in this regard is to devise policy, allocate budgets, and exercise oversight regarding policy implementation by the institutes. The MOI is in effect planning a matrix of industry-specific institutes and function-specific institutes. Below are recommendations by the Team for the direction of expansion that may be taken for the institutes in the future.

### **(1) Industry-specific institutes**

The major areas of activity of the existing industry-specific institutes may be given as these:

- 1) Collection and analysis of information related to the industry and recommendations to government for development policymaking based thereupon.
- 2) Coordination between the relevant industry and the government, and coordination within the industry.
- 3) Testing and inspection required by the industry, and certification and accreditation.
- 4) Information service for the industry, and consultation.

The key industrial categories singled out for attention in the IRP, and their corresponding industry-specific institutes, are as shown in the following table. One institute is not here: the Cane and Sugar Research Institute (CSRI).

Table 2.4-4. Industrial Sub-sector and Its Institute

Sub-sector	Institutes
1) Wooden Products and furniture	-
2) Gems and Jewelry	-
3) Footwear and leather	-
4) Textile and Garments	TTI
5) Ceramic and Glassware	-
6) Plastic Products	- (SIC)
7) Pharmaceutical and Chemical	-
8) Food and Animal Feed	NFI
9) Pararubber and Rubber Products	-
10) Vehicles	TAI (SIC)
11) Electrical Appliances	EEI (SIC)

There are seven sectors for which there is no specialized institute; this is an expression of the order of priority with regard to the use of institutes as an instrument of industrial policy. There is no institute for the plastics products industry, but the Supporting Industry Center that is to be established in late 1999 would be an equivalent as it will have a plastics industry division. The SIC would also perform institute-like functions on specific behalf of SMEs in the vehicles and electrical apparatus sectors. This would require (as is projected) absorption of the metalworking division of MIDI.

(2) Function-specific institutes

MOI intends to establish several function-specific institutes in addition to those now existing. Table 2.4-5 shows the functions required by the small and medium enterprise sector, and the corresponding institutes. These institutes are intended to serve all industrial categories but there is an unavoidable limitation presented by the facilities, equipment and specialized staff available to carry out the intended activities. Some institutes consequently cannot cover the entire spectrum of industry. This point is not considered in the following table, but it is believed that a detailed examination of the general situation should be made.



Table 2.4-5. Function-wise Institutes

Function	Institute
1) Production Technology (Hi-tech)	TGI
2) Production Technology (Essential technology)	SIC <sup>1)</sup>
3) Tool and Mold Technology (Plastic)	SIC <sup>2)</sup>
4) Productivity	FTPI
5) Management/Incubation	ISMED
6) Standards and ISO/TQM	MASCI <sup>3)</sup>
7) Testing, Calibration & Certification	TISI, TPI, NIMT, TISTR
8) Consultants and Technical Advisors	BSID/TPA <sup>4)</sup>
9) Energy Saving, Environment and Safety	-
10) Research and Development of Technology	-
11) Activation of Regional Industry	-
12) Distribution System	-

- (Note) 1) Supporting Industry Center of BSID, including old MIDl and SIC - Tool and Mold Technology Development Project  
 2) SIC - Tool and Mold Technology Development Project  
 3) Activities for TQM have not started yet.  
 4) Factory Evaluation System Project

With the exception of item 7, testing, calibration and certification, all of the above institutes have an abiding interest or assigned function related to education and training, or human resources development. Nevertheless, as now planned there would not be sufficient capability to directly provide technical guidance to private firms.

**(Reference)**

**Management and operation of the Institutes, and cooperation from Japan**

Primarily through the Japan International Cooperation Agency, the Government of Japan is providing assistance for all of the institutes, by dispatching experts, grant aid supply of equipment, and acceptance of trainees. Table 2.4-6 shows JICA technical cooperation as of July 1999 for efforts related to the IRP. There are many instances wherein the MOI is the implementing agency for long-term efforts at the transfer of technology. As this cooperation goes on in the future, it would be desirable that further efforts be made for improvement of techniques related to the operational know-how

equired of the personnel of the institutes. JICA technical cooperation has contributed greatly to the start-up of the existing institutes, and the maximum possible assistance should be provided to them and to new institutes in the future. In such a case, in addition to assisting individual institutes in matters special to each, it would be desirable for there to be technical cooperation and support for promotion of the overall concept of the MOI institutes (support for themes common to management and operation of all institutes).

Table 2.4-6. JICA Cooperation Program Relating to IRP

As of July 1, 1999

Program	Project Title/Assignment	Type of Cooperation	Implementing Agency/P lace of Assignment	Project Period/ Assignment Period
0 Operation and Management of the Industrial Restructuring	SME Policy & Finance	Individual Expert (S/T)	Ministry of Industry Ministry of Finance	1999.1~1999.7
	Industrial Restructuring	Individual Expert (S/T)	Department of Industrial Promotion, Ministry of Industry	1998.3~1998.87
	Japanese ODA Loan and Project Finance	Individual Expert	Fiscal Policy Office, Ministry of Finance	1998.3~2000.3
	Credit Risk Analysis	Individual Expert	Department of Industrial Promotion, Ministry of Industry	1999.2~2001.2
	Joint Long-term Planning	Individual Expert	National Economic and Social Development Board	1998.6~2000.6
	Industrial Development and Future Study	Individual Expert	National Economic and Social Development Board	1999.3~2000.3
	Supporting Industry Development	Development Study	Ministry of Industry	1993.9~1995.3
	Thailand Productivity Development Project	Project Type	Thailand Productivity Institute	Follow-up 1999.2~2001.2 1994.2~1999.2
	Testing and Inspection Technology Upgrading for Textile and Garment	Project Type	Department of Industrial Promotion, Ministry of Industry	Follow-up 1999.2~2001.2 1997.3~2001.2
	Thailand Industrial Standard Institute	Project Type and Grant Aid	Department of Industrial Promotion, Ministry of Industry	1989.12~1994.11 and 1988~1989
1 Improvement of Industrial Productivity and Renovation of the Production Process	Institution Set-up	Individual Expert	Electrical and Electronics Institute Thailand Automotive Institute etc.	1999.3~2001.3 (EEI) Others to be implemented
	Factory Evaluation	Individual Expert	Department of Industrial Promotion, Ministry of Industry	1999.3~2000.3
	Joint promotion Seminar on Industrial Standards	Joint Promotion	Thailand Industrial Standard Institute, Ministry of Industry	JFY1996~
	Energy Efficiency	Senior Volunteer	Federation of Thai Industry	1998.5~2000.5

Program	Project Title/Assignment	Type of Cooperation	Implementing Agency/P lace of Assignment	Project Period/ Assignment Period
4 Incubation & Strengthening of Small and Medium Supporting Industries	Tool and Mold Technology Development Project	Project Type	Department of Industrial Promotion, Ministry of Industry	1999.1~2004.10
	Metal-Working and Machinery Industries Development Institute	Project Type and Grant Aid	Department of Industrial Promotion, Ministry of Industry	1097.1~1991.9 and 1985~1986
	Small Industry Finance	Individual Expert	Small Industry Finance Corporation	1997.10~1999.10
	Financial Management	Individual Expert (S/T)	Department of Industrial Promotion, Ministry of Industry	1999.1~1999.3
	SMEs Finance	Second Country Training	Department of Industrial Promotion, Ministry of Industry	1999.2
	Northern Ceramic Development Center	Project Type	Department of Industrial Promotion, Ministry of Industry	1992.10~1997.10
5 Promotion of Product Design and Development and Enhancement of Global Marketing Channels	SIC Ceramics	Individual Expert	Thailand Institute of Scientific and Technological Research	1998.3~1999.3
	Competition Policy and Consumer Protection	Individual Expert	Department of Internal Trade, Ministry of Commerce	1998.4~1999.4
	APEC/PPF Seminar on Competition Policy	Third Country Training	Department of Internal Trade, Ministry of Commerce	1999.6~1999.11 (S/T)
	Industrial Property Information Center	Project Type	Department of Intellectual Property, Ministry of Commerce	1996JFY~2000JFY
	Industrial Property Administration	Individual Expert	Department of Intellectual Property, Ministry of Commerce	1995.7~2000.6
7 Inducing Foreign Direct Investment	Industrial Statistics	Development Study	Office of Industrial Economics, Ministry of Industry	1995.7~2000.3 (2 experts)
	Investment Promotion	Individual Expert	Board of Investment	1998.111999.6
				Phase 2 1999.6~2000.6
				1992.9~1999.6 (3 experts)
	APEC/PPF Seminar on Industrial Property Management	Third Country Training	Department of Intellectual Property, Ministry of Commerce	1999.3~2001.3
	ASEAN Joint Seminar on Industrial Property	Joint Promotion Program	Department of Intellectual Property, Ministry of Commerce	1996JFY~2000JFY
			1997JFY ~	

Program	Project Title/Assignment	Type of Cooperation	Implementing Agency/P lace of Assignment	Project Period/ Assignment Period
8 Management and Containment of Industrial Pollution	Automotive Fuel Research Project for Environmental Improvement	Project Type	Petroleum Authority of Thailand	1996.3~2000.2
	Industrial Water Technology Institute	Project Type	Department of Industrial Works, Ministry of Industry	1998.6~2000.5
	Environmental Management Planning Survey for Arsenic Contaminated Area of Nakhon Si Thammarat Province	Development Study	Environment Research & Training Center	1998.5~2000.3

Note)

- 1 The No.1-8 coincides with the Program of the Industrial Restructuring Plan.
- 2 JICA is also conducting the following Project Type Technical Cooperation as human resource development for industry development.
  - (1) Development of Mechanics Engineering Course at Bachelor Degree Level in Pathumwan Technical Collage
  - (2) The Project to Enhance the Capability of the Faculty of Engineering at Thammasat University.
  - (3) Research Center for Communication and Information Technology of King Mongkut Institute of Technology Ladkrabang.

Source: Thai JICA Office

## **2.5 Rural Industrial Development**

### **2.5.1 Current State of Rural Industrial Development Policy**

#### **(1) Eighth National Economic-Social Development Plan**

The National Economic and Social Development Board (NESDB) published the following three items as basic strategy to implement rural industrial development during the Eighth National Economic-Social Development Plan.

- 1) Promotion of development with emphasis being placed on the participation of rural residents and their potential capabilities
- 2) Creation of job opportunities within the rural regions
- 3) Review of regional development administrative organizations

In addition, the Prosperity Decentralization Policy and Committee (PDPC) which is the special committee responsible for the study of the planning development guidelines for rural development was launched in January 1997 by NESDB as the first step to implement the said plan.

#### **(2) Rural Industrial Development Strategy of the Ministry of Industry**

OIE published in November 1997 the industrial development policy of the Ministry of Industry as a whole in the form of Industrial Policy and Criteria based on the Eighth National Plan. To work for the qualitative and quantitative improvement of rural small and medium scale industry is given therein as a central issue of industrial policy. The Minister of Industry himself has taken every opportunity to emphasize the importance of rural industrial development.

Rural industrial development strategy at the ministry focuses on three points:

- 1) Dispersion of industry from the Bangkok metropolitan area to rural regions
- 2) Development of existing regional small and medium scale industries as well as establishment of new industries
- 3) Improvement of MOI rural administration systems

**(3) Rural Industrial Development Plan of the Ministry of Industry**

With the industrial development plan implemented by the Ministry of Industry is nation-wide in scope, it includes some policies which are being actually implemented with emphasis on rural development. They include:

- Promotion of rural industrial development (PRID) projects
- A revolving fund project for cottage and handicraft industries
- Development of industrial estates by IEAT in rural regions
- An entrepreneurship development program
- A small scale industry promotion project

There are outlined as follows.

**1) Promotion of Rural Industrial Development Projects**

- Name of project:** Promotion of Rural Industrial Development Project
- Name of project:** Promotion of Rural Industrial Development Project
- Institution in charge:** Bureau of Industrial Promotion Administration, DIP
- History:** In line with the Eighth National Economic-Social Development Plan, the Project was launched in April 1997 by MOI as a rural industrial development project. At the beginning, the project was funded to which the budget allocation only, but later was added funds provided by the World Bank and by the Japanese government (Miyazawa fund).
- Contents:** MOI encourages industries located within Bangkok metropolitan areas to relocate their factories in rural regions, and to subcontract productions to rural

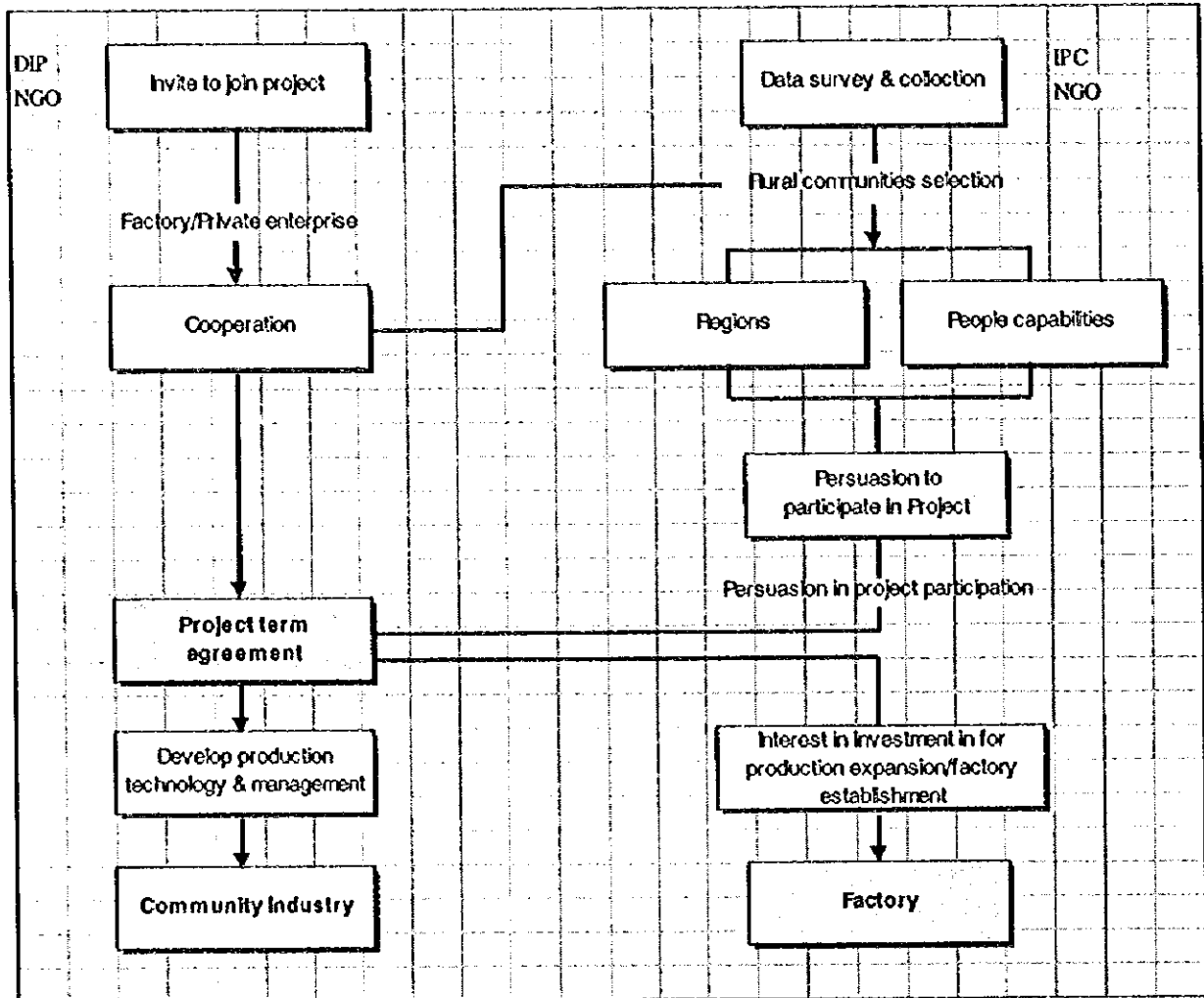
industries, while encouraging rural industries to be receptive to such relocation and subcontracting, and endeavoring to develop the rural workforce accordingly.

Thus, MOI is promoting a more balanced development that would reduce regional income disparities, work to optimize national resources, and create jobs in rural regions.

The scheme is characterized as Tripartite Cooperation Scheme of (1) private enterprises of the Bangkok Areas, (2) rural residents, and (3) MOI as well as NGOs appointed by the Ministry. The ministry is coordinator of the scheme as well as mediator between enterprises and rural residents. Working on the receiving end are eleven Regional Industrial Promotion Centers which are regional offices of the Department of Industrial Promotion, or are to be implemented by NGO's under contract to DIP. Refer to Figure 2.5-1 and 2.5-2 for graphic representations of graphic representations of the project.

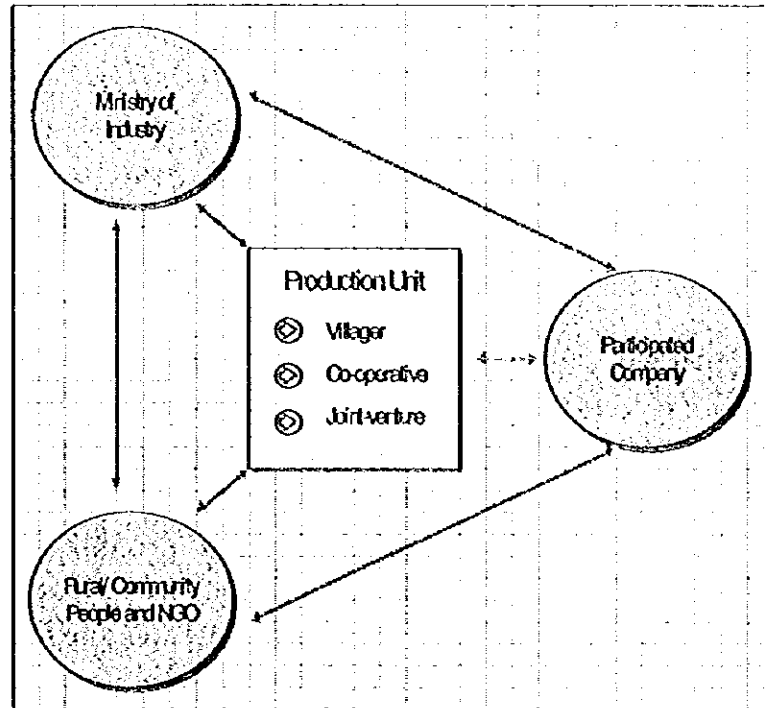


Figure 2.5-1. Regional Industrial Development Project



Source: BIPA

Figure 2.5-2. Tripartite Cooperation Scheme



Source: BIPA

As of April 1999, 127 PRID projects have been established nationwide, creating 7,685 jobs in rural areas. The rate of completion of projects so far is as high as around 85%. In addition, 92 on-going projects as well as 120 new projects are expected to be implemented during 1999.

The implemented projects are largely in textile related industries, followed by the footwear industry and food processing industry. So far, achievements in machinery and electric parts and components are few. The major problem so far encountered is that the influence of the economic crisis has caused delays or discontinuation of projects. Nevertheless financial disbursements for PRID projects have been increasing. Also, while funding support for a project is limited in principle to 3 years at the most, projects which can not be implemented within three years are seen. Thus, a problem that has arisen, especially relative to plans, is that a too-long time period is required to implement some projects.

## 2) Revolving Fund for Cottage and Handicraft Industries

**Name of project:** Revolving Fund for Cottage and Handicraft industries

**Institution in charge:** Credit Assistance Scheme Division, Bureau of Cottage and Handicraft Industries Development, DIP

**History:** The project predate the crisis; it has been implemented since 1981. The current definitions of cottage and handicraft industries are enterprises with fixed assets of less than 10 million bahts (excluding land). Funding requests were processed through DIP as well as regional DIP offices, but since October 1998 have been processed by every provincial offices of MOI. As of October 1, 1998, amount of the cumulative funding balance was as 297 million bahts for 6,347 case (46,800 bahts average per case).

**Funding, services:** Funding is in principle limited to a revolving fund. Conditions and procedures of funding differ for each case, i.e.,:

- Funding of less than 50,000 bahts: 6% interest p.a., two years repayment period including 4 months grace; no collateral mortgage, but requiring more than two co-signers.
- Funding of 50,000 - 100,000 bahts: Same as above, but requiring recommendations submitted under the names of civil servants of higher than level 4. Funding of less than 100,000 bahts will be approved by DIP regional offices.
- Funding of 100,00 - 300,000 bahts: 6% interest p.a., 10 years repayment period including 12 months grace. Land, machinery, or bank guarantee accepted as security. Regional

committee approves funding.

- Funding of 300,00 - 1,000,000 bahts: Same conditions apply as to the funding of 100,00 - 300,000 bahts. Funding, however, is approved by the DIP Director himself. A minimum of 3 months generally will be required to make a final decision. (As of April 1999, ceiling of funding was 500,000 bahts.)

Due to the economic crisis and consequent credit crunch, demand for this fund is increasing. Although readily available information concerning the implemented funding is limited to those related to the Bangkok area, the number of implemented cases of funding is steadily increasing. During 1998, 33 cases were implemented. The number of fundings predicted to be implemented during 1999 is around 50 cases, according to the informed sources.

Table 2.5-1. Fund Approval in Bangkok Area

(Unit: baht)

	Loan Amounts	
	~50,000	5,000~500,000
1996	2	2
1997	7	3
1998	11	22
Total	20	27

Source: BCHID

In terms with institutional funding related to the up-bringing of rural small and medium scale industries, because Small Industry Finance Corporation (SIFC) is offering funding scheme with interest rate of 1% less than SFIC interest rate to SMEs existing in the specific rural regions. However, because ordinary SFIC interest rate itself is slightly higher, funding by SFIC offers no incentive to rural SMEs. (Refer to article 2.2, funding for SMEs for further details)

### 3) Development of rural industrial estates by IEAT

The Industrial Estate Authority of Thailand (IEAT) is increasing the physical area available within No. 3 zones of BOI section. The following table shows that within No. 3 zone while the area developed by IEAT is as much as 78%, that developed by the private sector is no greater than 44%. Also, IEAT is making spaces for factories available for small and medium scale enterprises through lease arrangements. In spite of the efforts so made to develop rural industrial estates, at present there is an of over-supply, and hence a challenge for promotion activities for IEAT.

Table 2.5-2. Industrial Estates by BOI Zoning

BOI Zoning & Land Developer		Supply area (Rai)		Total Area (Rai)
		GIZ	EPZ	
Zone 1	IEAT (public corporation)	3,076	1,178	4,254
	Private	15,745	272	16,017
	Sub-total	18,821	1,450	20,271 (20%)
Zone 2	IEAT (public corporation)			
	Private	29,641	1,551	31,192
	Sub-total	29,641	1,551	31,192 (30%)
Zone 3	IEAT (public corporation)	12,420	2,570	14,990 (78%)
	Private	35,693	1,675	37,368 (44%)
	Sub-total	48,113	4,245	52,358 (50%)
Total	IEAT (public corporation)	15,496	3,748	19,244
	Private	81,079	3,498	84,577
		96,575	7,246	103,821 (100%)

Note: 1 Rai = 1,600 m<sup>2</sup>

Source: BOI

### 4) Entrepreneurship Development Program

Name of project: Entrepreneurship Development Program

Institution in charge: Bureau of Industrial Enterprise Development, DIP

Objective: Entrepreneurship development; upgrading of the capabilities of managers of existing small and medium scale enterprises

**Contents:** The program comprises lectures courses intended to train managers of existing small and medium scale enterprises or their family members who are planning to establish new businesses or expand existing businesses. Participants are to be no younger than 20, but the, average age of attendees is 35 - 40. The program was launched in 1980 and frequency of lecturing has been increasing year after year to as often as 5 lecturing during Year 1998. courses attract an average of 30 attendees, and the cumulative number of attendees is 2,000. Courses are offered throughout Thailand, but emphasis is on rural regions. 70% of the courses have been given for rural indents, and 20% for metropolitan areas, with the remaining 10% in Bangkok.

The lecture subjects are Investment Opportunities Study, Timing, Follow-up Services. The theme Timing, for example, covers the following subjects: Advancement motivation training; business management (personnel, marketing, production, financial management and factory visits); feasibility studies; legal aspects of setting up a business; and technical and industrial information service.

Courses last there 3 weeks, and are 6 to 7 hours a day. the venues include Regional Industrial Promotion Centers of DIP, local colleges and universities, and hotels.

#### 5) Small-Scale Industry Promotion Project

**Name of project:** Small-Scale Industry Promotion Project (SSIPP)

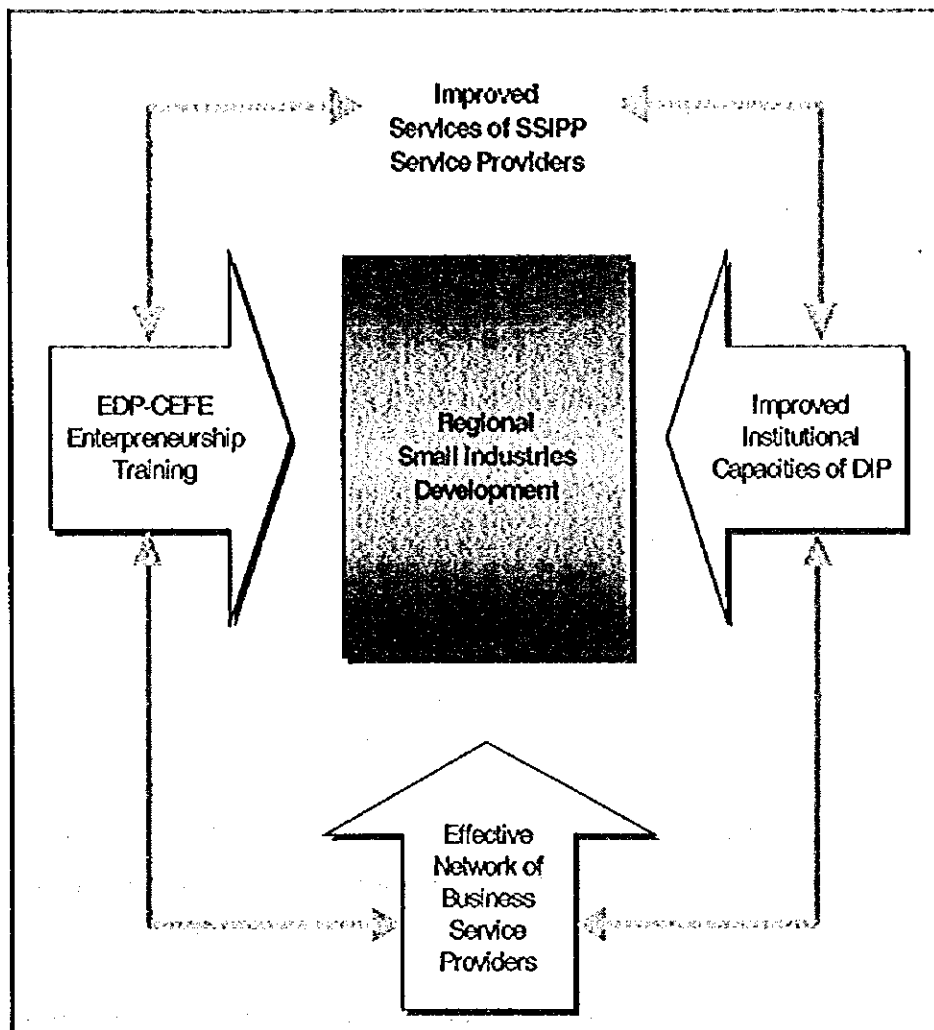
**Bureau in charge:** Bureau of Industrial Enterprise Development, DIP

**History:** Based on the Entrepreneurship Development Program (CEFE program) sponsored by German

Government, for which the implementing agency is Deutsche Gesellschaft für Technische Zusammenarbeits (GTZ), SSIPP was launched as technical cooperation project, for three regions only, the Upper-North Region around Chiang Mai, Lower-Northeast Region around Nakhon-Ratchasima, and Western Region around Suphanburi.

GTZ works out a program for each meeting, and advertise and select the students who will participate to program in cooperation with IPC of DIP. GTZ trains the local candidates for the trainers of this program, in parallel. One of distinctive feature is that the program urges to the students to form their own judgement through business game, in other words, the program emphasize how to solve a problem rather than teaching knowledge of management. Attendees include not only potential entrepreneur but also existing managers (in this case, principal objective being the improvement of existing enterprises)

Figure 2.5-3 Conceptual Flow of SSIPP



Source: GTZ

#### (4) IRP Related Projects

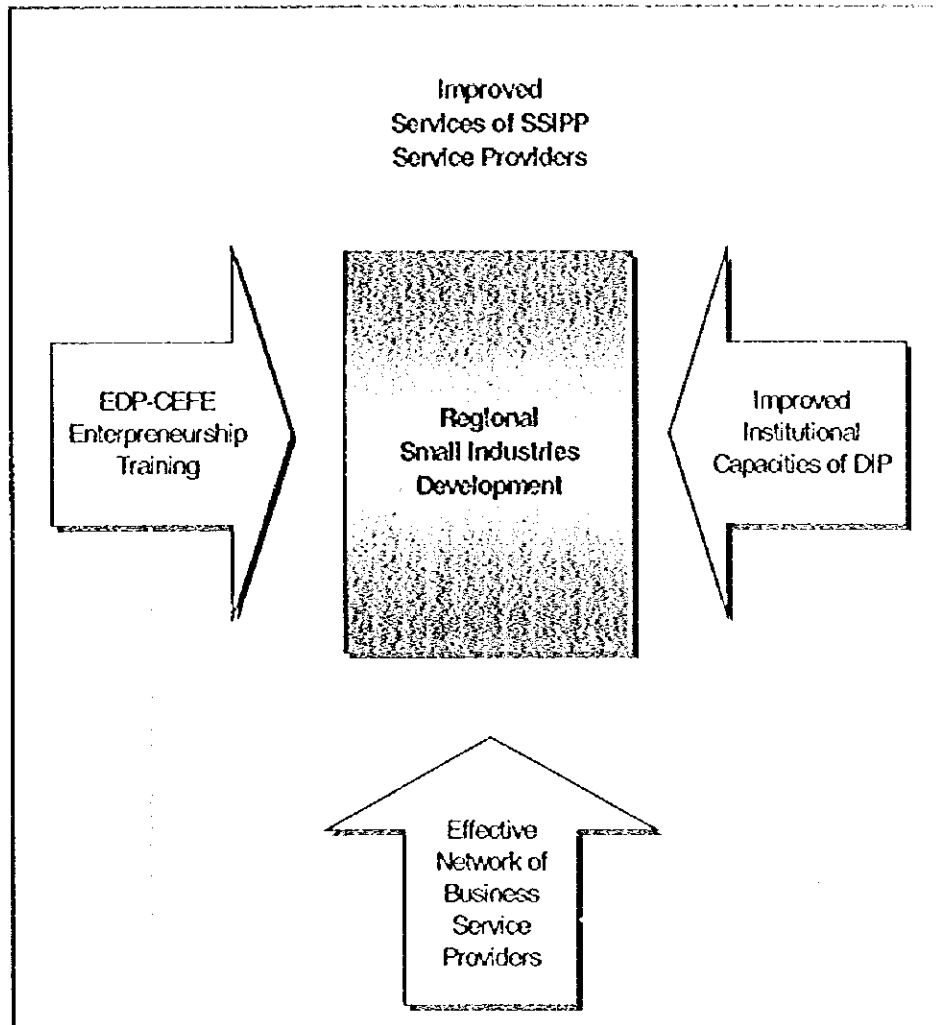
Industrial Restructuring Projects, initiated this year, include number of sub-projects leading to rural industrial development. Among the projects implemented in April 1999, the following projects include rural industrial development objectives or activities (Titles in English are those published by IRP committee).

##### 1) Project on dispersion of industry to rural area (Project No. 20)

Implementing institution: Bureau of Industrial Promotion Administration, DIP



Figure 2.5-3 Conceptual Flow of SSIPP



Source: GTZ

#### (4) IRP Related Projects

Industrial Restructuring Projects, initiated this year, include number of sub-projects leading to rural industrial development. Among the projects implemented in April 1999, the following projects include rural industrial development objectives or activities (Titles in English are those published by IRP committee).

##### 1) Project on dispersion of industry to rural area (Project No. 20)

Implementing institution: Bureau of Industrial Promotion Administration, DIP

The project is similar in kind to PRID projects. It is intended to establish rural industrial infrastructure, to implement vocational training of rural residents (villagers) as well as to promote dispersion of industries from metropolitan areas to rural areas through the implementation of investment motivation program.

- 2) Loan project for the movement of labor-intensive industry out to regions (Project No. 21)

Implementing institution: Industrial Finance Corporation of Thailand

In conjunction Project No. 20 (above) this supports relocation of factories to rural areas through low interest rate loans by the IFCT.

- 3) Project for HRD in industry fund (Project No. 11)

Implementing institution: Bureau of Industrial Promotion Administration, DIP

The Ministry of Industry provides subsidies to SMEs in rural areas which are in need of outside specialists for in-house training and HRD bringing programs.

- 4) Project to disseminate information on small and medium trade and investment through IT (Project No. 15)

Implementing institution: Bureau of Industrial Promotion Policy and Planning, DIP

The Ministry of Industry has opened an informative internet home-page relative to regional industries, and business environment in general, in order to provide indirect support for investment into rural region and related market development.

- 5) Project to survey the need of labor insufficiency for the purpose of effective labor movement (Project No.23)

Implementing institution: department of Employment, MLSW

In order to ensure that manpower required in specific region is provided, vocational training, introductions will be provided through regional offices of MLSW.

## **2.5.2 Organization and System for the Development of Regional Industry**

### **(1) Overall structure**

Figure 2.5-5 shows internal organization of the Ministry of Industry as seen primarily from the view point of promoting development of small and medium scale enterprises, and rural industrial development. Overall industrial policy of the Ministry of Industry is planned by Policy and Planning Division of OIE, with follow-up by various departments in charge of planning policies to apply to the fields within their own jurisdictions. Policies relative to small and medium scale enterprises come under the jurisdiction of the Bureau of Industrial Promotion Policy and Planning (BIPP) of DIP that takes into consideration recommendations and suggestions provided by other bureaus of DIP as well as regional Industrial Promotion Centers (IPC). In general, BIPP provides policy direction, and concrete action plans are often established through consultations between BIPP and related bureaus. BIPP is comprised of the Industrial Development Policy Division which is in charge of overall small and medium scale industrial policy, the Industrial Decentralization Policy Division which is in charge of policy for dispersion of industry to rural area and for regional industry, and the Industrial Information Center which is in charge of development and control of information.

### **(2) Relations between central and local administrations**

DIP has established Industrial Promotion Centers in eleven locations in order to implement concrete actions relative to regional industrial development. Each IPC director is appointed by the DIP Director and budget and business management comes under the jurisdiction of the Bureau of Industrial Promotion Administration (BIPA). Accordingly, reporting from each IPC to DIP goes usually through BIPA.

The scale of IPCs varies by geographical location, and range of its business also differs from each other. The Chiang Mai IPC is by far the largest with 130 employees. It is followed by four IPCs located in Khon Kaen, Sphan

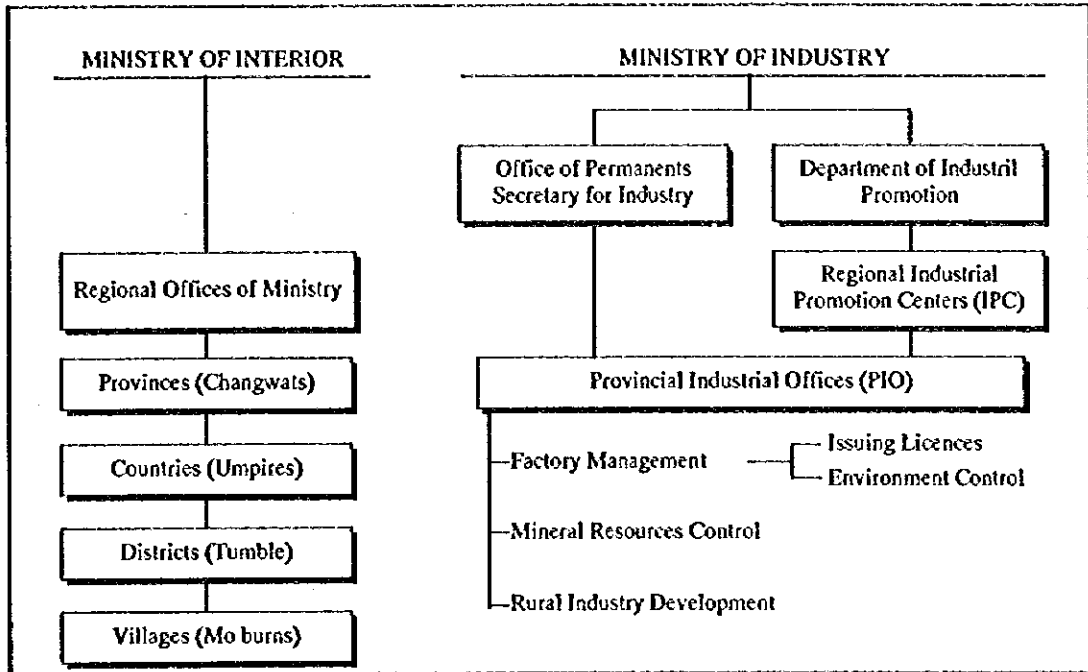
Buri, Chon Buri, Songkhla, each with more than 50. These five IPCs each have five sections (see Figure 2.5-6). The remaining six IPCs each have 12 to 20 and 3 or 4 sections. Basically, IPC is characterized as a regional office of DIP and conducts businesses as DIP through coordination with individual bureaus of DIP. Principal tasks which are common to all IPCs include at least: (1) development and support of regional enterprises, and (2) development and support technically and financially of small businesses and cottage industry.

Accordingly, Technical Industrial Officers who are capable of offering consulting services are permanently stationed at each IPC, although their number is no greater than 10 at the most. Some IPCs have only 2 or 3 officers. Accordingly, there are cases where some of those officers are occupied more with business coordination rather than by consulting work. The principal work currently being conducted includes PRID projects and working capital funding projects.

The Ministry of Industry operates MOI Provincial Industrial Offices in 75 provinces throughout Thailand but excluding Bangkok. These offices come under the jurisdiction of the Office of Permanent Secretary of MOI headquarters and office directors are appointed by the Permanent Secretary. Tasks of the offices are to act as regional surrogates of the businesses to be undertaken by MOI, but in reality higher priority is given to the control and supervision of factories (guidance concerning factory registration and safety, processing of waste, and so forth). In other words, these are activities conducted primarily by Department of Industrial Works of MOI, and officials in charge of industrial promotion have been stationed at the offices only during last several years. The number of officials in charge of provincial industrial promotion and who stationed in a office is usually no more than one, who works as Policy and Planning Officer. Normally, he works in coordination with IPC and is obliged to report to IPC.

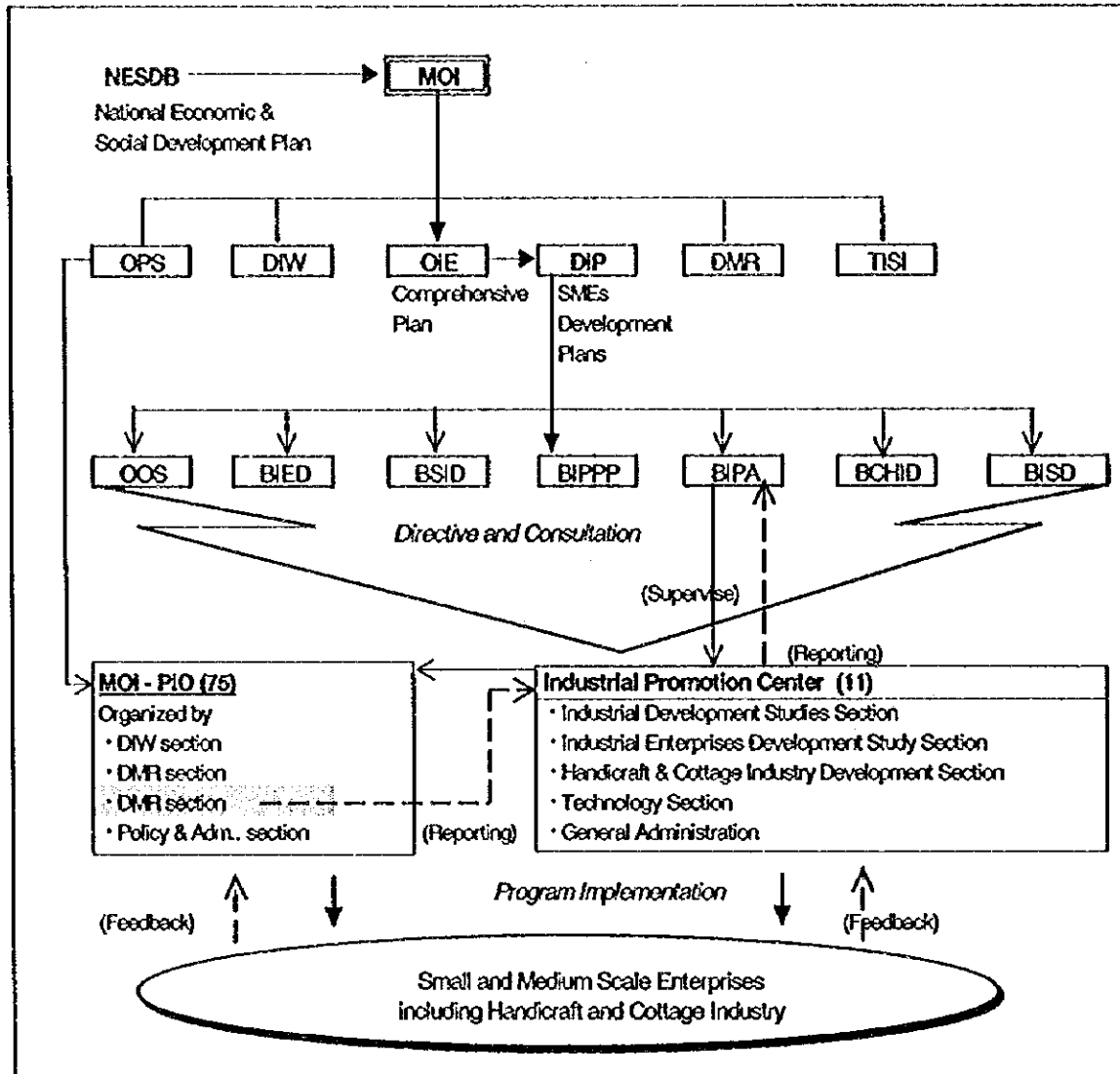
Officials at both IPC and Provincial Industrial Promotion Offices are subject to nationwide rotation with tenure of office of around four years. Under any circumstances, Budgets are appropriated by MOI headquarters, leaving very little discretion at the level of the office.

Figure 2.5-4. Regional Administrative Organization



Source: MOI

Figure 2.5-5. Systematic Flow of Policy Making and Implementation of Industrial Development



Notes

NESDB : National Economic and Social Development Board

MOI : Ministry of Industry

OPS : Office of the Permanent Secretary

DMR : Department of Mineral Resources

DIW : Department of Industrial Works

OIE : Office of Industrial Economics

DIP : Department of Industrial Promotion

TISI : Thai Industrial Standard Institute

BIPPP : Bureau of Industrial Promotion Policy and Planning

OOS : Office of the Secretary

BIPA : Bureau of Industrial Promotion Administration

BIED : Bureau of Industrial Enterprise Development

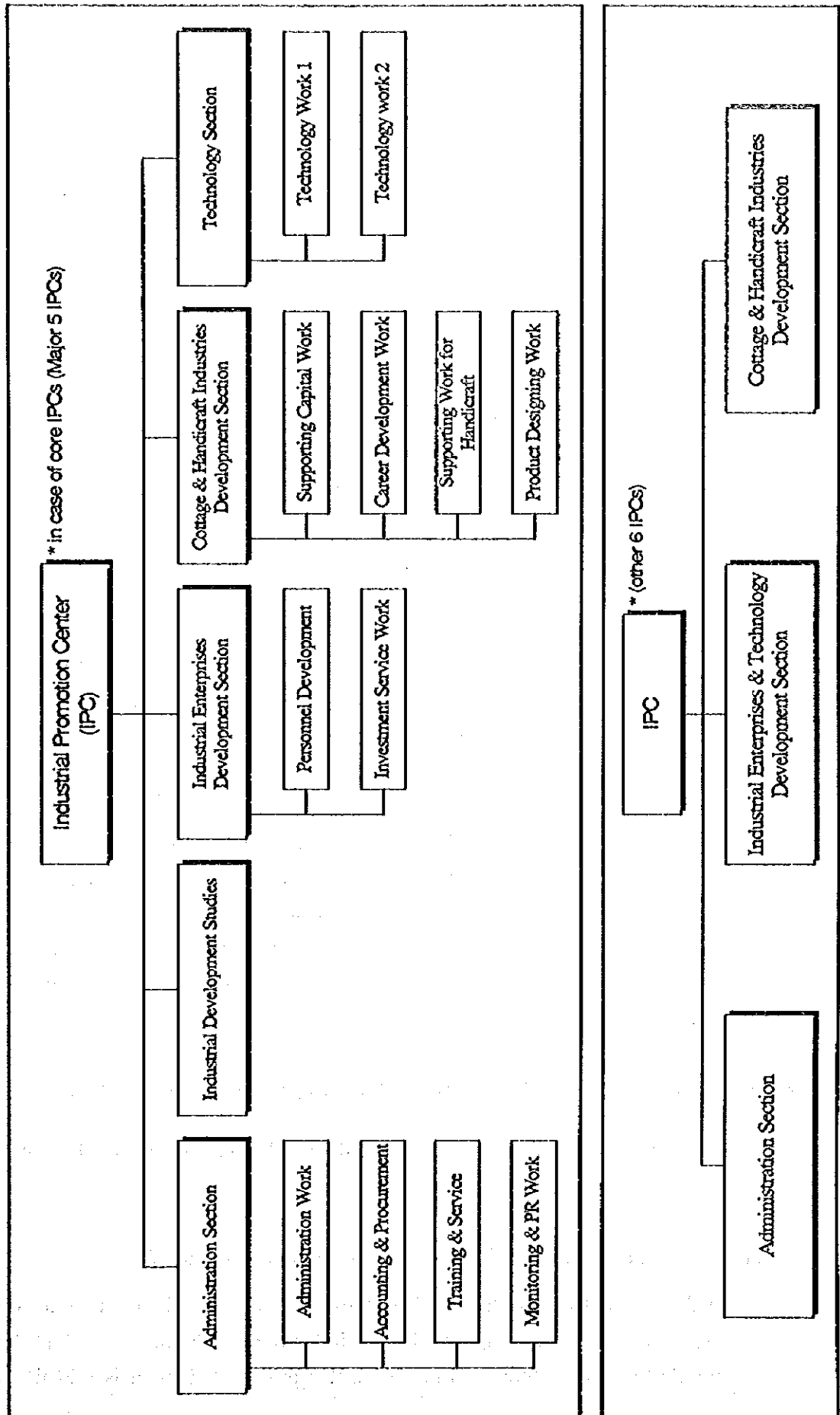
BSID : Bureau of Supporting Industries Development

BISD : Bureau of Industrial Sectors Development

BCHID : Bureau of Cottage and Handicraft Industries Development

Source: MOI

Figure 2.5-6. Organization Chart of IPC



### **(3) Relations between regional public sector and regional private sector**

Every province has its Governor's Office in charge of provincial administration. While the Governor's Office is usually regarded as regional agency of the central government, the Governor's Office exercises initiative to operate Provincial Joint Public/Private Consultative Committee (Korloror). These committees are called Provincial Korloror and usually convene once every two months.

Provincial Korloror provides opportunities to discuss regional economic subjects jointly by and between public sector and private sector representatives, and conclusions drawn therefrom are forwarded to the central Korloror chaired by the Prime Minister (NESDB acts as a central Korloror on Secretariat).

The Interests of the public sector are represented by MOI Provincial Offices and IPC, while interests of the private sector are represented by regional representatives of three private sector groups (FTI, Chamber of Commerce, Bankers Association). However, participation of representatives of small scale enterprises and small scale businesses in those three private sector groups is restricted and the voice of local industry is hardly listened to and is given insufficient consideration. At present, although appraisal of the value of KOLOROR system is widely divided, it is the sole bottom-up system in existence. One of the tasks to be achieved from now on in terms of regional industrial development would be how to organize small and medium scale enterprises and small businesses which are the majority group within the region and how to absorb their footing into the regional industrial development program.

### **2.5.3 Issues to be Considered for Regional Industrial Development**

The following problems await immediate solutions for regional industrial development.

#### **(1) Absence of region-specific industrial development master plans**

Although Joint Public/Private Consultative Committees chaired by Governors are providing opportunities to discuss industrial development at a high level jointly by public sector and private sector representatives, it is said that the



committee is hardly functioning effectively. The committee tends to discuss current topics and medium-term and long-term regional industrial development policy is not taken up by local representatives. Although it is said that the Ministry of Industry is thinking to bestowing on IPC authority to plan and establish policy of regional industrial development, at the present moment, no region-specific industrial development plan has been established by the local communities. The existing system of regional administration and budgeting system is a top-down system with Bangkok at the apex. While many and various reforms and improvements are believed to be needed, regional residents, to clearly identify the direction toward which they wish to advance in line with regionally available resources and their own needs

(2) Incomplete regional financing system

Development of regional industry has been so far limited to very few regions and as both a cause and result, the regional financing system is quite incomplete. Although the networks of the BAAC for farmers' credit and GSB as a deposit-taking institution for saving are extensively developed throughout Thailand, industrial finance is available only in major cities. Even what is available, however, is inadequate as the current SIFC interest rate system gives no preferential treatment to regional small scale enterprises that seek funds. Moreover, the funding system currently provided by the Ministry of Industry for small scale enterprises is functioning only as a supplement to commercial financing and does not stand alone as industrial financing. The role to be played by the financial system in regional industrial development in the future is highly significant and establishment of a regional industrial finance system including provision of credit guarantee (supplementary) service is urgently needed.

(3) Absence of regional initiative to encourage industrial investment

The Thai Government advocates relocation of factories from the Bangkok metropolitan area to rural regions, and desires that new industrial investment be made in rural regions, to achieve regional industrial development. However, no initiative is being exercised by the local governments of the rural regions to attract industrial investment. Although BOI operates six regional offices, those regional offices only provide regional information to potential

investors who approach rural regions through the central administration. In other words, none of those regional offices are exercising their own initiative and using their own strategy to attract foreign and domestic investors. It is evident from the experiences of local governments in many other countries that encouragement of investment in the region will definitely support and accelerate the growth and development of regional industry and regional economies. And aggressive approach to potential investors and encouragement of their investment must be organized.

**(4) Absence of an institution dedicated to promotion of regional industrial development**

The administration system of Thailand is highly centralized and in this context, the governors' offices in the Provinces are no more than surrogates of central administrative institutions. No regional institution capable of exercising initiative in regional industrial development promotion, including establishing a region-specific industrial development master plan, exists. Joint efforts by and between regional public and private sectors is indispensable for the coordination of their respective efforts and new regional industrial development organization by the activities of which framework of existing IPC, Governor's Office or Provincial KOLOROR is surpassed, will be definitely needed in the near future.

**(5) Incomplete access to market (information) from rural regions**

For upcountry regional enterprises of Thailand, development of market for their products and acquisition of information for that purpose are extremely difficult. Future success of activities of enterprises will depend more and more on how quickly, effectively and continually they collect useful information. This is true regardless of the scale of enterprise or its location. In this context, for an administrative institution to provide support through the collection and supply of information will be a key to success in regional industrial development.

**(6) Completeness of statistical data on regional industry**

Incompleteness of statistical data on regional industry will obstruct establishment of regional industrial development policy. The Ministry of

Industry has made it mandatory for domestic factories to apply for and acquire operation permits. Application is usually submitted to Provincial Office of MOI (PIO) and records are kept by PIO. However, since 1997, acquisition of an operation permit has not been mandatory for factories with less than 20 employees, with certain special exceptions. As a result, statistical data on small scale enterprises are no longer being up-dated and trends of the sector are no longer as well known as in the past.

The Ministry of Industry has initiated announcement of monthly industrial activity statistics since January 1999. These statistics cover only large scale enterprises; no statistical data is being collected from small scale enterprises. And yet it is understood that the greater part of regional industrial activity is at small scale enterprises and in this context, incomplete statistical data on small scale enterprises must be viewed as a significant impediment to obstruct planning of industrial development policy. The Ministry of Industry is therefore strongly urged to improve its monitoring of the overall state of Thai industry by improving statistical and other surveys.

