

CHAPTER 1

INTRODUCTION

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1.1 Background and History of the Study

- (1) In 1998, the Government of China established the State Department of Small and Medium Enterprises at the National Economic and Trade Commission to promote small and medium-size enterprise promotion policies following the business liberalization policy for small and medium-size enterprises (SMEs) because of its recognition of the important role played by SMEs in economic development together with the reform of state enterprises which was prompted by their poor business performance.
- (2) During the Japan-China Summit in November 1998, the Japanese side expressed its willingness to provide cooperation for the promotion of SMEs in China and actual cooperation (Five Year Plan to assist SMEs in China) commenced by several Japanese aid organizations (JICA, JETRO, AOTS, Japan-China Association for Economy and Trade, Small Business National Corporation and others).
- (3) Under these circumstances, the State Department of SME of the National Economic and Trade Commission made a request to the Government of Japan to conduct a development study which would select several model cities in China for a study on SMEs and to recommend SME promotion policies for each model city. In response, the basic survey for project formulation was conducted in 1999 to discuss the basic framework for the Study for the Small Enterprises Promotion Plan for Model Cities with the Chinese side. As a result, it was agreed that the Study would be conducted in two cities in each of the two years of cooperation, totaling four cities. The model cities selected for the Study in fiscal 2000 were Shenyang in Liaoning Province and Hangzhou in Zhejiang Province. Following this agreement, a preliminary study team was dispatched to each city in June 2000 to discuss matters relating to the implementation of the Study with the Chinese side. It was finally decided to implement the Study in line with the contents of the Scope of Work (S/W) and the Minutes of the Meeting (M/M) agreed by both sides on July 11, 2000.

1.2 Purpose of the Study

The purpose of the Study is to formulate a SME promotion plan for the selected model cities, i.e. Shenyang in Liaoning Province and Hangzhou in Zhejiang Province, as a model plan for the promotion of SMEs throughout China, which has begun efforts to promote SMEs.

In addition to making recommendations for SME promotion policies for each model city, the Study intends the implementation of more concrete cooperation activities to assist the realization of the recommendations; namely the diagnosis of and guidance for model enterprises and pilot implementation of key policies. Moreover, knowledge and technologies (skills) will be transferred through the Study to policy-makers, local organizations supporting SMEs and SME owners to assist the improvement of the abilities of those involved in the development of SMEs.

1.3 Scope of the Study

(1) Target SMEs

The target SMEs are those operating in manufacturing sectors that meet the definition of a SME¹ in China. All types of ownership, i.e. state ownership, collective ownership and private ownership, are featured in the Study.

Target industrial sectors requested by Chinese side are as follows:

- General machine industry
- Automotive parts industry
- Electronics and Information industry
- Environmental protection industry

(2) Target Areas of the Study

Shenyang in Liaoning Province and Beijing (Shanghai and Shenzhen are also included to obtain information on the available investment funds).

¹ No official definition has yet been decided. The following descriptions are for reference purposes only.

- Classification Categories in 1998 (Industries): The categories of “Special Large”, “Class 1 Large”, “Class 2 Large”, “Class 1 Medium”, “Class 2 Medium” and “Small” based on the production capacity and amount of fixed assets apply to 150 industries.
- Announcement by National Statistical Bureau in 1999 (unofficial): Large enterprises are those with either an annual turnover or total assets of more than 500 million yuan while those with 50 million yuan are classified as small enterprises. Enterprises falling between these two categories are classified as medium-size enterprises.

1.4 Main Items of the Study

The scope of the Study is determined by the S/W and M/M signed by the JICA and the Chinese side on 11th July 2000.

1.4.1 Framework of the Study

The overall picture of SME promotion policies consists of three essential layers as shown in Fig. 1-4-1.

The first layer shows direct study of SMEs through visiting SMEs.

The second layer shows a set of study items for investigation of SME supporting organizations/systems, SME promotion policies and industrial policies formulated by Shenyang government organizations.

The third layer, i.e. the legal system and social mechanism, belongs to the realm of the macro-economy and, therefore, is not directly within the scope of the Study. However, it must still be taken into careful consideration in the course of the Study.

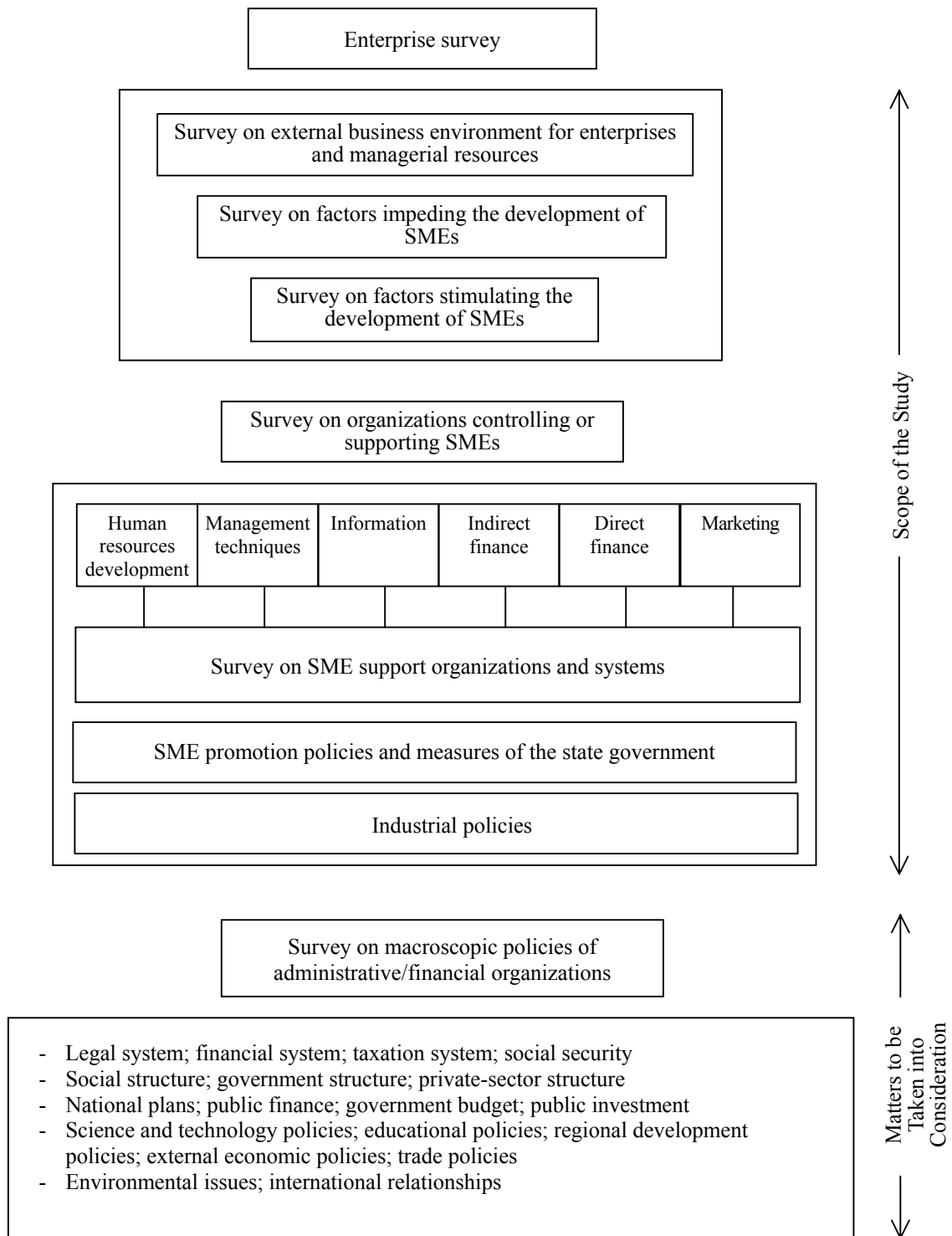


Fig. 1-4-1 Framework for SME Promotion Study

1.4.2 Major Items of the Study

- (1) Compiling SME measures in Japan as lecture materials
- (2) Study on current status of SMEs
Study of 100 SME utilizing local consultants
- (3) Diagnosis and guidance for 10 model enterprises
 - General survey
 - Solutions
 - Verification of guidance
- (4) Study on the current conditions of SMEs promotion measures
 - State-level SME promotion measures
 - SME promotion measures of ShenyangInformation collection and consultation from local contract experts
- (5) Implementation of pilot project
- (6) Formulation of proposed SME promotion plan
- (7) Conducting counterparts training in Japan
- (8) Holding of workshop/seminar

1.5 Points of the Study

1.5.1 Recommendation for Policies and Measures to Suit Actual Situation of China

The restructuring of state enterprises poses a critical issue in Shenyang and there are great expectations that SMEs will play a leading role in such restructuring. To enable SMEs to perform their expected role, however, it is essential for the Study to identify the structure and future vision of aid policies of the government for the subject industries in order to clarify the present status of SMEs in Shenyang.

The Shenyang Municipal Authority hopes to link the promotion of SMEs to the general industrial development of the city. SMEs are considered to comprise key components of supporting industries for such important industries as the automobile and machine processing industries in the city as they are expected to act as subcontractors capable of supplying reliable parts to large enterprises, including public enterprises, in these industries. The industry attracting particularly strong expectations is the environmental protection industry which is expected to not only manufacture environmental protection equipment but also to lead industrial promotion in the city through the development of new markets and new industries based on the introduction of new products as well as new technologies. Moreover,

this industry is expected to upgrade the city's socioeconomic image. In the case of finance, information and high-tech industries, a strong concentration of these activities in the city is planned. However, it is not a sound policy to promote SMEs to create supporting industries as SMEs can play a leading role in the electric/electronics industry and the information industry, etc. Therefore, comprehensive SME promotion policies are required. These will be compiled by each member of the Diagnosis Group with in cooperation with the Policy Group members.

1.5.2 Study Noting Importance of Transfer of Knowledge and Technology to Chinese Side

Particular attention will be paid to the transfer of technology to the Chinese side to ensure the positive results of the Study and the continuity of such results after the Study.

The Study Team transferred technology (skill) to the counterpart organizations of the Shenyang municipal government, local consultants, owners and managers of enterprises who were participated in the diagnosis and pilot project.

Technology transfer was conducted by means of OJT, workshops and the training of counterparts in Japan during the joint study process.

Since Syenyang municipal government has been conducted administrative reform by reducing number of officers, the Team prioritized technology transfer to the SME supporting group of private sectors or semi public sectors.

1.5.3 Partnership Activities²

The Study Team took up “Information network service for SMEs” as a theme of the pilot project in order to provide Shenyang with a permanent information network of activate partnership activities for SMEs in Shenyang. Another important objective is to foster Shenyang SME Service Center (SYSMESC) as a mediator of the partnership activities.

The partnership is the theme of the highest priority requested from Shenyang ETC in expectation of the following significant objectives:

- Direct output of promoting Shenyang economy
- Indirect enhancement of Japan/China business promotion by improving investment environment

² All activities of economic and trade exchange such as export/import, business alliance of sales and production, joint venture and FDI, and technology transfer etc.

1.5.4 Viewpoints of Industrial Structure and Industrial Policy

The restructuring of state enterprises poses a critical issue in Shenyang and there are great expectations that SMEs will play a leading role in such restructuring. To enable SMEs to perform their expected role, however, it is essential for the Study to identify the structure and future vision of aid policies of the government for the subject industries in order to clarify the present status of SMEs in Shenyang.

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1.5.5 Placing Emphasis on High-technology

In February 2001, Shenyang ETC established "Shenyang enterprise technology innovation center" in order to optimize science and technology resources allocation, technology reform service, and integration of technology and economy. Shenyang ETC assembled 100 excellent SMEs to explain this decree.

The study team also proposed some measures of industrialization of high-technology research output and supporting methods for new business founders.

In order to confirm proposals, the study team visited incubation centers in research institutes, universities, and industry development zones.

1.6 Method of the Study

Fig. 1-6-1 depicts the process of the study.

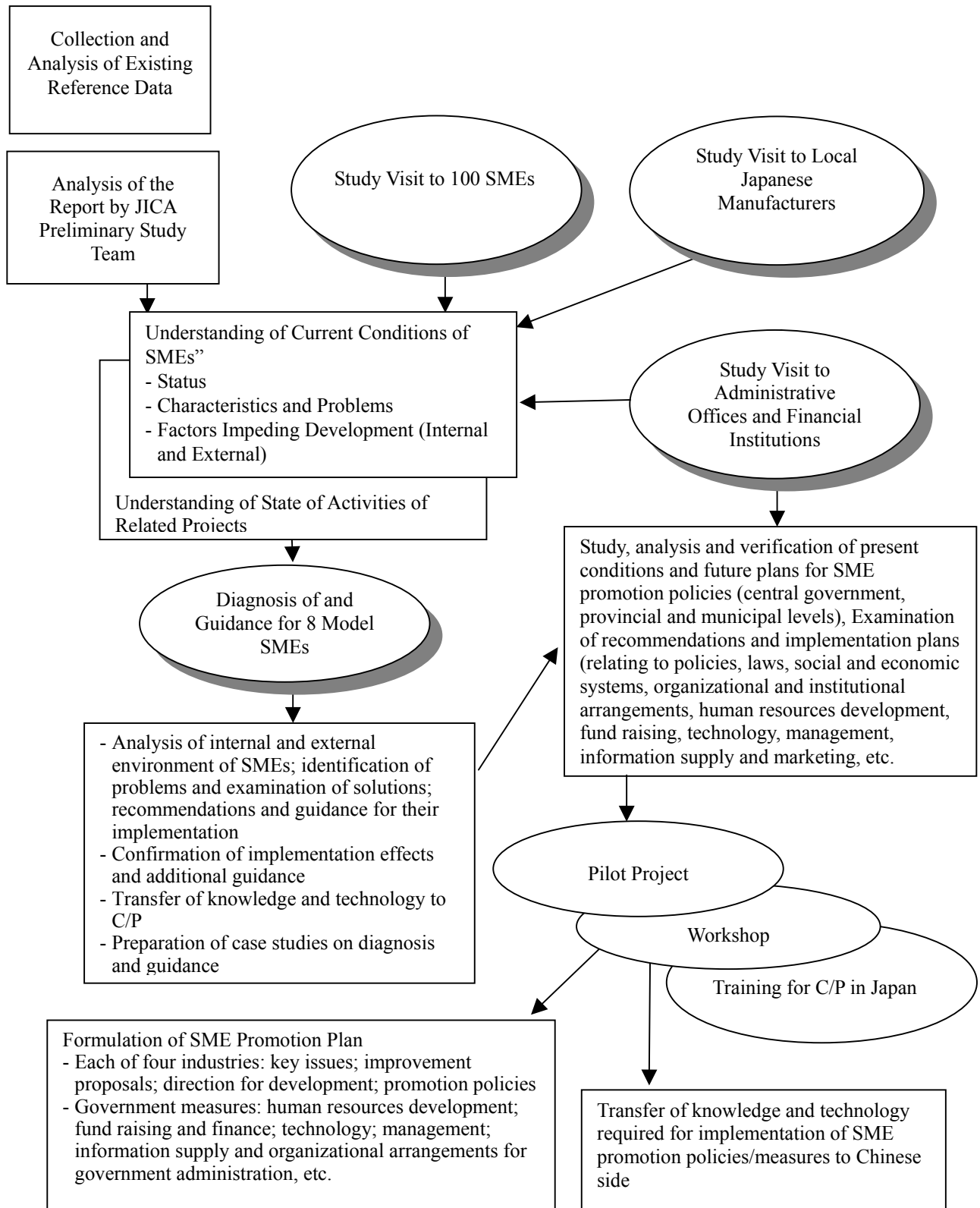


Fig. 1-6-1 Schematic Diagram of the Study

1.6.1 Matrix for Diagnosis of and Guidance for Model Enterprises

In order to put forward recommendations for policies and measures, the Study Team must identify factors impeding the promotion of SMEs and problems in regard to existing measures by means of diagnosis and guidance activities. For this purpose, the Study Team members will be divided into the Policy Study Group (Policy Group) and the Diagnosis Study Group (Diagnosis Group) to form an organized matrix.

- **Diagnosis Group** : While conducting a separate diagnosis for the general machine industry, electronics and information industry, automobile parts industry and environmental protection industry, the diagnosis of and guidance for SMEs will be conducted by the Study Team member in charge of marketing study across industries. The Study Team member in charge of the marketing study must ensure that the diagnosis and guidance closely relate to the realities of each industrial sector.
- **Policy Group** : This group consists of experts in six different fields. All of these experts will participate in diagnosis to conduct a study on the current conditions of SMEs and factors impeding the promotion of SMEs from the viewpoint of their own specialist fields.

Fig. 1-6-2 shows the concept of the division of work among the Study Team member the subjects and processes of the studies by the two groups will be determined in advance to ensure the effective functioning of the study matrix. The members responsible for SME diagnosis and analysis will act as an interface for the two groups.

Based on the principle of emphasizing fieldwork, the activities of the JICA Study Team will be characterized by the priority of product development, an area in which Japan excels, while also taking institutional development and human resources development into consideration. The study subjects of the Policy Group are diverse, ranging from official bodies providing support for SMEs to financial institutions and agencies providing assistance for the development of SMEs.

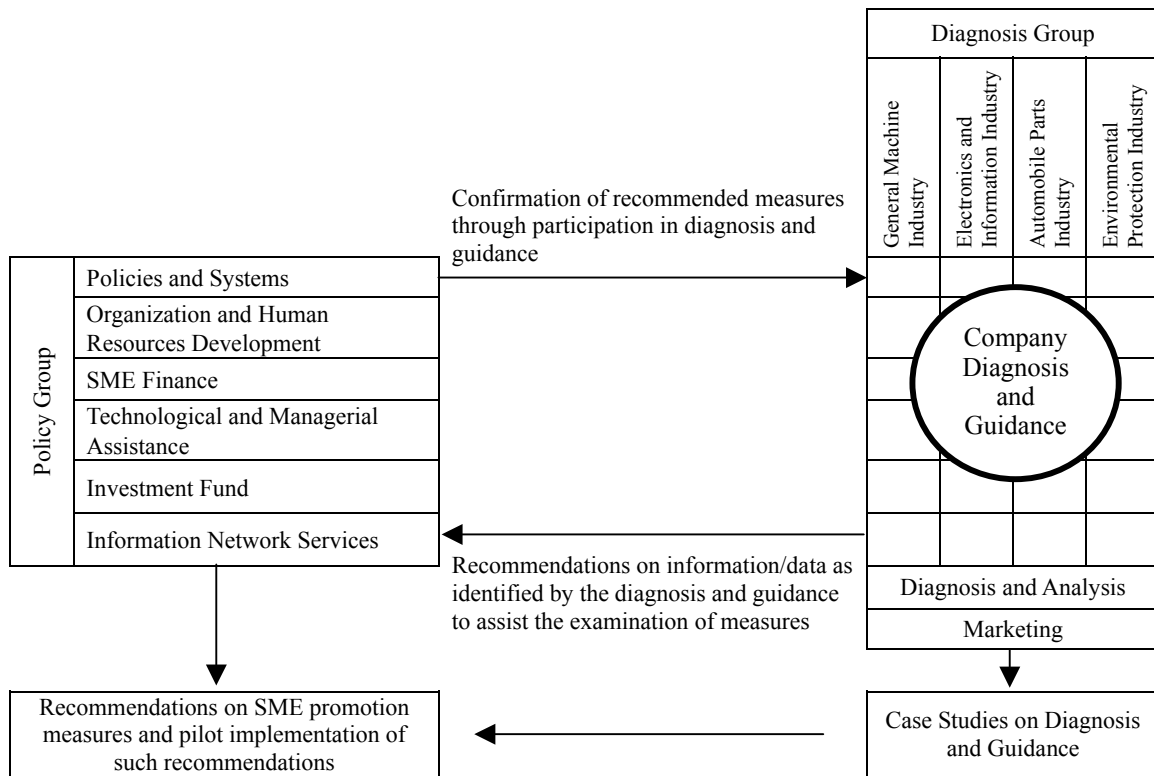


Fig. 1-6-2 Conceptual Diagram for Company Diagnosis Study and Matrix of Planned Work

1.6.2 Collaboration of the Study Team and Counterparts

A major counterpart of the study is the Shenyang ETC, and the Department of SMEs, which is a subordinate agency of SMETC. The World Bank Loan Industry Project Management Office, and the SME Development Project Office are in charge of coordination and general support of the Study Team.

Other counterparts were assigned from each industrial sector, i.e. general machinery, automotive parts, electronics/information, and environment protection. The Steering Committee for the project which was chaired by a deputy director of SMETC was organized with above mentioned counterparts and other representatives from an administration department other than ETC, and the Federation of Industry and Commerce.

The counterparts of the Pilot Project were SME Service Center, SY Information Center, and SY Credit Guarantee Center and they were coordinated by the department of SME.

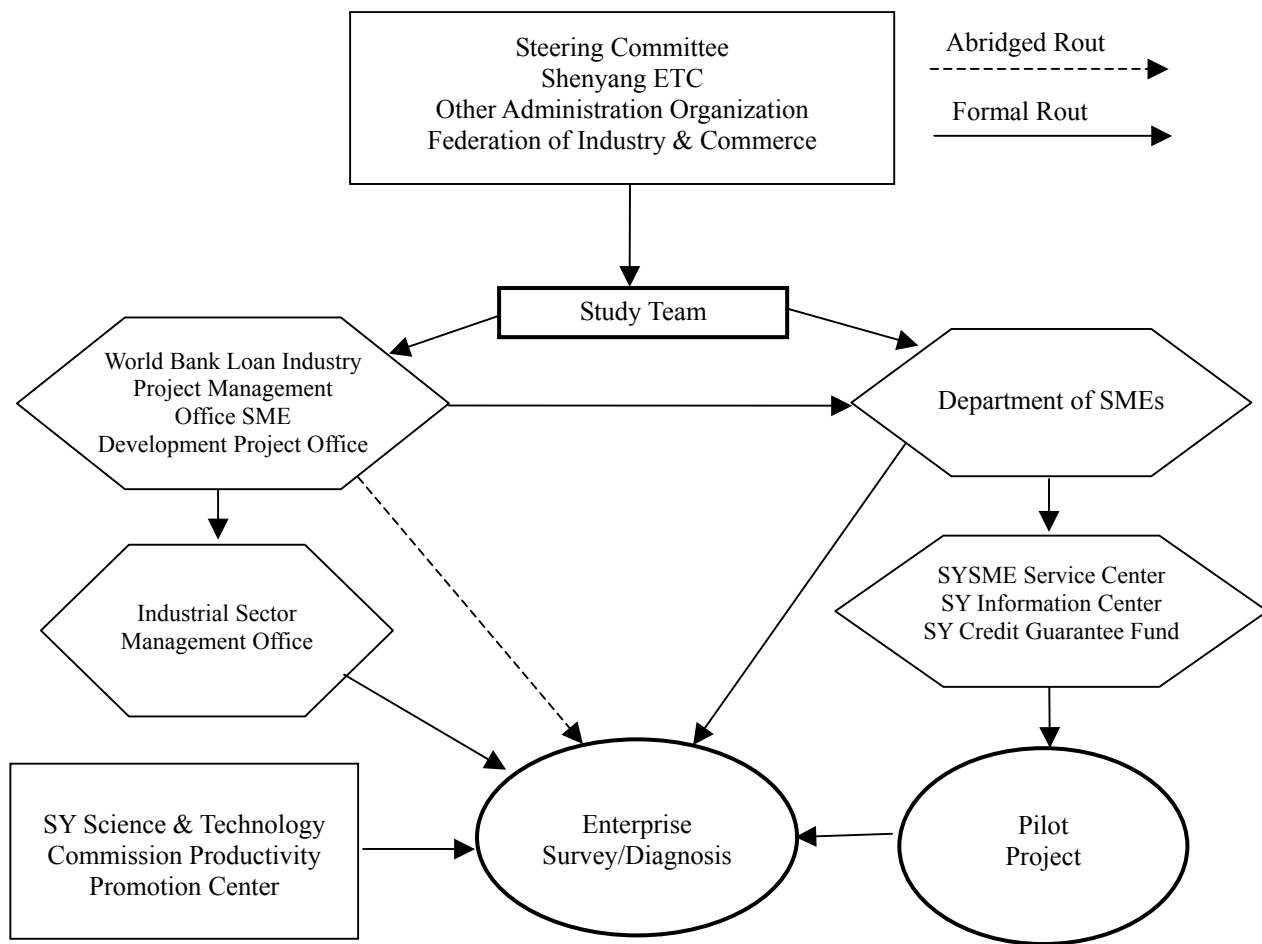


Fig. 1-6-3 Study Network

1.7 Outline of the Study Results

1.7.1 Visited Organizations and Enterprises

Table 1-7-1 shows the area covered by the Study and the organizations visited. The total number of enterprises is 140. Three model enterprises which were selected in the First Field Survey participated in the pilot project as potential business partners with Japanese enterprises. This fact indicates the effectiveness and integrity of the Study. The Study Team's visits to Beijing, Shanghai, Shenzhen, Tiansin, and Dalian makes the study on Shenyang's economy and industry objective and puts it into perspective.

Table 1-7-1 List of Organizations Visited

Policy & Measure study

State level organizations (Beijing)

State ETC
 Ministry of Science and Technology of China
 Economy development research center, States affair academy
 Beijing city socio economic development center
 Bank of People's republic of China
 China Construction Bank
 China Minsheng Bank
 DFID, World Bank, UNIDO
 Tsinghua University, 3 E Project Group
 Tsinghua University, Automotive Institute

Other districts

Shanghai Property Transaction Center
 Shanghai ETC
 Shenzhen Economic Development Bureau,
 Productivity Promotion Center
 Shenzhen SME Service Center
 Shenzhen International High-Tech industry
 Transaction Center
 Shenzhen Security Exchange Center
 Tiansin Enterprise Management Training Center
 Dalian ETC

Organization of Liaoning province

DFID
 ETC

Shinning city level

ETC
 Industrial sector offices
 SME support centers
 Industrial Technology Exchange Center
 CGF
 Productivity Promotion Center, SYSTC
 Industrial Technology Exchange Center
 Bureau of township-village enterprise
 Private economy development promotion commission
 Federation of Industry and Commerce
 SY Branch of Commercial Banks
 China construction bank, Hua xia bank Guandong
 development bank
 Syenyang city commercial Bank
 Commodity transaction center of China

Industrial zones inn Shenyang

Economic and technological development Zone
 Shenyang High-tech Industry Development Zone
 Tiexu Industrial Zone
 Dadong Science and Technology Zone
 Universities and Colleges
 Liaoning University
 Northeastern University
 Shenyang University
 Shenyang Vocational Training Center
 Human Resources Market
 Private Consulting Companies: Three companies
 Research Institute:
 Metal Research Institute
 Automation Research Institute
 Shenyang Research Institute of Foundry
 SY Institute UHV Technology & Applications

Shinning ward level

Dadong ward government
 Tiexu ward government
 Heping ward government
 Huanggy ward government

Enterprises for diagnosis and survey

No. of enterprises for questionnaire survey	100
No. of visiting survey by Study Team	65
Model enterprises included	10
No. of enterprises visited by LC	35
Japanese venture enterprises	7
Other enterprises	11
Total number	118

Organizations visited during pilot project

Enterprises consulted for business match-making	7
Other enterprises of business match-making	3
No. of enterprises in the automotive parts industry for foreign business cooperation	13
Total number	23

1.7.2 Results of Visiting Survey

The Study Team organized enterprise diagnosis teams consisting of C/P, local consultants headed by the study team member, and carried out additional visiting survey /diagnosis during the first field survey period.

The local consultants conducted visiting survey for additional enterprises selected in the second field survey due to limited time.

Table 1-7-2 List of Companies Visited

Major Sectors Handled	Team Members (Note 1)	Number of Companies Visited	Ownership Type				Visit Period
			State-owned	Collective	Private	Foreign	
General machine	Study Team members (1 member each) C/P (1 member each) Interpreter (1 member each) L/C (1 member each) Other (Note 2)	11	6	5			10/23 - 11/08/2000
Automobile parts		11	2	1	8		10/23 - 11/08/2000
Electronics/Information		10	4	2	4		10/23 - 11/08/2000
Environmental protection		11	4	2	2	3	10/23 - 11/08/2000
Other 1		10	2	1	9		10/23 - 11/08/2000
Other 2	Study Team member (1 member each)	6	1		3		11/03 - 11/08/2000
Other 3	L/C interpreter (1 member each)	11	1	2	3		11/03 - 11/08/2000
Other 4	L/C (2 members each)	30					11/21 - 11/30/2000
–	–	100					10/23 - 11/30/2000

Note 1) Team members show composition as a rule. C/P (counterpart), L/C (local consultant)

2) The Study Team member in charge of policy and staff of the Science and Technology Committee took part as necessary

1.7.3 Diagnosis and Guidance for Model Enterprises

The study team and Shenyang ETC selected model enterprises considering such items as enterprise performance, future possibility of growth, cooperative attitude for the study, and expected output of the guidance. Screening results were approved by JICA head office.

The study team visited enterprises seven times on average before completion of the total program.

When the study team visited enterprises in February, all enterprises faithfully implemented improvement items that the study team proposed at the First Field Survey. With additional improvement, model enterprises achieved the initial target. The study team advised enterprises to tackle minor problems, which they can implement by themselves. By accumulating these experiences, the manual of diagnosis and guidance was edited.

In order to broaden the view of finding opportunities for SME in Shenyang, the study team visited other enterprises beyond SME category such as large-scale machinery manufacturers, high-technology enterprises, large-scale Japanese invested enterprises and industrial development zones.

Table 1-7-3 Model Companies

No.	Sector	Company Holding Type	Main Products	Diagnosis and Guidance Themes
1	General machinery	State-owned	Vacuum pumps	Reduction of NG rates, improvement of productivity
2	General machinery	State-owned	Stop valves	Examination of subcontracting, improvement of productivity
3	Automobile parts	Private	Resin floorboards	Quality and technology levels, improvement of resin quality
4	Automobile parts	Private	H/A heaters	Competitive quality production
5	Electronics and information	State-owned	DC heaters	Cost control, sales control, control setup
6	Electronics and information	Private	Cardiac monitor systems	New product development, improvement of productivity
7	Environmental protection	Private	Starch-based biodegradation containers	Preparations for commissioning of new plant
8	Environmental protection	Private	Sludge dewatering and drying machines	New product development, fabrication plant improvement
9	Other	Private	Cement plants	1) Specific methods for business plan deployment 2) Organizational reform for integration of production planning 3) Adoption of cant charts in schedule planning
10	Other	State-owned	Alumina and ceramic parts	1) Utilization of NG reduction measures and quality control methods

1.7.4 Pilot Project and Master Plan

(1) Pilot Project

Project theme: Information network for SMEs

The pilot project was carried out in according to the procedure shown in Table1-7-4. From the inception of selecting the project theme, the study team employed the PCM (Project Cycle Management) method to meet Chinese needs and to make the collaborative relation with Chinese side the first priority.

The expected objective of the pilot project that is deeply related to the formulation of SME promotion measures has been achieved.

The next issue is maintaining and improving the information network for SMEs by the Chinese side and supporting Japan/China partnership activity by the Japanese side.

Table 1-7-4 Study Process of the Pilot Project

	Job item	March	April	May	June	July	August
Information Network	Hardware	Preparation —————	Purchasing =====				
	Basic software	Preparation —————	Purchasing =====				
	Package software	Preparation —————	Purchasing =====				
	Compiling home page for SMEs	Preparation —————	Preparation	Explanation to SMEs =====	Implementation	Test	
	Development p of Application software	Preparation —————	Contract =====	Technical explanation	Design/Implementation =====	Test	—————
	Operation (Technology transfer)	Study			System arrangement =====	Preparation of material =====	Technology Transfer =====
Business Matching	Business Matching			—————		—————	
	Fostring SY SME Service Center			—————		—————	
	Cash-flow Management Software Development			—————			
	PDM Formulation		★ PDM-2		★ PCM Problem Analysis		★ PDM-3

(2) Proposals for SME Promotion Measure

The study team formulated the next eight master plans as proposals for SME promotion measures. In the course of proposal making, the study team had frequent meetings with C/Ps to reflect their needs and requests.

- Construction of SME supporting system and its development
- Market development for SMEs through partnership activities
- Industrial structure reform
- High-technology promotion
- Strengthening of enterprise management base
- Supporting SME indirect finance
- Facilitation of foreign investment to China
- Supporting SME investment fund

For implementation of each master plan, specific projects have been proposed and formulated in 18 action plans in total. The study team recommends the following eight plans be implemented immediately.

- Reinforcement and expansion of the information network for SMEs
- Fostering of SME service center
- Continued Japan/ Shenyang partnership activities
- Supporting incubation functions and TLO (technology transfer and business implementation)
- Diagnosis and guidance for excellent SMEs
- Promotion of business management and finance training program to foster excellent SMEs in Shenyang

1.7.5 Technology Transfer to Counterparts

Although technology transfer to enterprises targeted for diagnosis is of utmost importance for the development study, the highest priority has to be placed on those who are in a position to conduct diagnosis and guidance for enterprises. They are counterparts. Counterparts are classified into three types.

- (1) Government officers
- (2) Members of government subsidiary organization (C/Ps for the pilot project)
- (3) Private consultants (participants of enterprise diagnosis in the first field survey as assistant to study team members)

In the Study, C/Ps from the government organizations were basically not participating full time. It is not certain that they will be permanent specialists in the diagnosis job. Rather, some of them have been moved to other sections as a result of administrative reform. However, their experience of working at shop floors or exchanging ideas with the study team members will be significant for them regardless of their change of position.

Private consultants, or members of government subsidiary organizations, on the other hand, are in the position of earning their own income by themselves according to market principles; therefore, they are very serious about absorbing professional technology and skill.

SY ETC nominated Meridian Consulting Co., which joined the Study from October 2000 through November 2000 as the assistant to the visiting diagnosis staff, to the Shenyang SMEs Service Center in December 2000. SY SME Service center has been participating in the pilot project as a counterpart since May 2001, and it has been a mediator of business matching under the Study Team's guidance. Such matching was the most effective technology transfer.

1.7.6 Holding of Workshops

Table 1-7-5 shows a record of workshops.

Table1-7-5 List of Seminar

Type Date	Audience Number of person	Theme	Presentator/Lecturer
Seminar 2000/10/16	70 C/P, Government, Enterprise representatives	SME Promotion Measures in Japan	Koyama, Kasahara, Kotsuka
Seminar 2000/11/17	10 SY ETC, World Bank Project Office, Local consultants	PCM Method	Watanabe
Workshop 2000/11/23	10 SY ETC, World Bank Project Office, Local consultants	PCM Problem Analysis of SMEs	Watanabe, Kotsuka, Kasahara, Nakao
Explanation 2000/11/30	2 C/P Trainee visiting Japan	SME Promotion Measures in Japan	Kasahara, Kotsuka
Seminar 2001/2/21	40 C/P, Government, Enterprise representatives	1) Success factors for enterprises 2) Necessary R&D for SMEs in Shenyang Note: Same seminars took place in two other enterprises	Igarashi, Matsuura
Seminar 2001/3/2	150 Enterprises	1) Productivity 2) Success factors for enterprises 3) Development of SY industries 4) Outline of the Pilot Project	Watanabe, Kotsuka, Koyama, Yokoyama
Explanation 2001/3/8	30 SME Credit Guarantee Fund of Liaoning Prov.	Japanese credit guarantee systems	Fujiwara
Briefing 2001/5	50 SMEs	Information network	Watanabe, Yokoyama, Nakao SY Information center SYSME service center
Seminar 2001/5/24	100 Dadong ward government officers	Development of Japanese SME promotion and its future trend	Kotsuka
Seminar 2001/5/31	40 SMEs in Dadong ward	Development condition of SMEs in the market economy	Kotsuka
Seminar 2001/6	8 All members of SYSME service center	Method of UNIDO FS software (COMFAR Expert-III)	Consultant for UNIDO
Seminar 2001/6	40 SME Credit Guarantee Fund of Liaoning Prov., Dalian, Anshan cities)	Credit guarantee system and the Cash-flow-base management	Fujiwara, Koyama
Seminar 2001/6/7	40 SMEs in Dadong ward	HRD in SMEs and Business management model	Kotsuka
Seminar 2001/6/12	40 SMEs in Dadong ward	Business strategy of SMEs and Business management	Kotsuka
Seminar 2001/8/14	120 SMEs	The cash-flow-base management	SYSMECGF Mrs. Wang
		Introduction of SYSMECGF	SYSMECGF Mr. Gao
		Introduction of SYSME service center	SYSME service center Ms. Yu Bo
Seminar 2001/9/20	40 Counterparts, SMEs in Dadong ward	SME promotion measures Effective use of information network for SMEs	Watanabe
Seminar 2001/9/21	50 Counterparts, SMEs in Donling ward	1. Method of enterprise diagnosis 2. How to succeed in partnership activities	Hamano, Koyama

1.8 General Work Plan

		2000			2001
		9/23~10/7	10/08~12/02	12/06~12/20	2/11~3/19
Schedule		Step 1 Preparatory Work in Japan (15 days)	Step 2 First Field Survey (56 days)	Step 3 First Work in Japan (15 days)	Step 4 Second Field Survey (1) (37 days)
Activity		Preparation of Inception Report 9/21★	Simplified Diagnosis (100 SMEs) Workshop 1 Diagnosis and Guidance for Model SMEs	Training of C/P in Japan 12/11★	Pilot Project Diagnosis of and Guidance for Model SMEs Workshop 2 Workshop 1
Result			Progress Report (1)	Interim Report	Progress Report (2) Case Studies on Diagnosis and Guidance
2001					
		5/16~7/3	7/4~7/12	9/16~9/30	9/27~10/6
Schedule		Step 5 Second Field Survey (2) (45 days)	Step 6 Second Work in Japan (20 days)	Step 7 Third Field Survey (16 days)	Step 8 Third Work in Japan (7 days)
Activity		Pilot Project	 8/6★ 9/7★	Explanation of and Discussions on Draft Final Report Workshop 3	
Result			-Draft Final Report -Draft Case Studies on Diagnosis and Guidance		-Final Report - Case Studies on Diagnosis and Guidance -Information NW Manual

★ advisory committee

Fig. 1-8-1 General Work Plan

1.9 Member of the Study Team

Table 1-9-1 Member List and Job Description

	Name	Responsibility	Job Description
1	WATANABE Akira	Leader	<ul style="list-style-type: none"> - Management and guidance of the Study Report - Control of Study Report - Management of the pilot project - Report and communication with JICA - Total project scheduling - Collaboration with relevant organizations/
2	KOYAMA Tetsuo	Policy/Institution	<ul style="list-style-type: none"> - Management of policy study group - Study on SME promotion measures - Visiting survey on government organizations and relevant organizations - Study on relevant laws and regulations concerning SMEs - Explanation of the Draft Final Report
3	HAMANO Masahiro	SME Diagnosis/Guidance	<ul style="list-style-type: none"> - Management of diagnosis group - Study on the enterprise diagnosis and analysis - Management of model enterprise diagnosis and guidance - Explanation of the Draft Final Report
4	KOTSUKA Yoshizou	Organization /Human Resource Development	<ul style="list-style-type: none"> - Specific study on the HRD systems - Supporting and guidance to make infrastructure to foster business managing instructor - Supporting ward level SME service systems and operation
5	FUJIWARA Hiromichi	SME Indirect Finance	<ul style="list-style-type: none"> - Specific study on the indirect finance for SMEs - Supporting pilot project operation in terms of finance - Implementation of the cash-flow business management
6	KASAHARA Korenobu	Technology/Management Support	<ul style="list-style-type: none"> - Specific study on technology and management support for SMEs
7	KA Sho	Investment Fund	<ul style="list-style-type: none"> - Specific study on the investment fund for SMEs - Coordination with Chinese counterparts
8	YOKOYAMA Tsuneaki	Information Network Service	<ul style="list-style-type: none"> - Specific study on the information network service - Total technical management and coordination of the pilot project (C/P and soft-house) - Preparation of purchasing computer hardware/ software in China - Inspection of software developed in China
9	NAKAO Yutaka	Marketing	<ul style="list-style-type: none"> - Specific study on marketing during enterprise visiting survey and diagnosis - Support of the pilot project operation in terms of business matching - Total management of Japan/China partnership activities
10	SUZUKI Hiroshi	General Machine Industry	<ul style="list-style-type: none"> - Enterprise visiting survey and, diagnosis in terms of the general machine industry - Model enterprise diagnosis and guidance
11	MATSUURA Kanae	Automotive parts industry	<ul style="list-style-type: none"> - Enterprise visiting survey and, diagnosis in terms of the automotive parts industry - Model enterprise diagnosis and guidance

	Name	Responsibility	Job Description
12	MORIMOTO Kiyoshi	Environment protection industry	- Enterprise visiting survey and, diagnosis in terms of the environment protection industry - Model enterprise diagnosis and guidance
13	IGARASHI Juro	Electronic/information industry	- Enterprise visiting survey and, diagnosis in terms of the electronic/information industry - Model enterprise diagnosis and guidance
14	ASAMI Akira	Information network Technology	- Support and technical advice to constructing information network system - Compiling and basic specification of software for the information network systems - Submission of technical specification of the software to Chinese side - Preparation and operation of the test and receiving inspection of the software
15	MURAKAMI Takeshi	Information network Operation/market	- Operation of the information network in terms of business matching - Preparation of technical information in terms of business matching in collaboration with Japan Technomat
16	KURAMOCHI Toshio	Information network Operation /finance	- Operation of the information network in terms of guidance of finance - Development of computer software of cash-flow business management
17	HIRAYAMA Baihou	Interpreter	- Interpreter during meetings with Chinese side and visiting survey - Translation of information collected during the study
18	FURUKAWA Akira	Interpreter	- Interpreter during meetings with Chinese side and visiting survey - Translation of information collected during the study
19	RYUU Getsu	Study coordinator	- Business support to the Team - Assistant to interpreter

1.10 Chinese Counterparts

Table 1-10-1 Chinese Counterparts

Responsibility	Name	Title, Position
Leader	Ma Guan Wen	Shenyang ETC Specialized Committee
Assistant to leader	Li Yue Li	Shenyang World Bank Loan Industry Project Management Office, Deputy director
Study team support	Shi Ming	Shenyang SME Development Project Office Assist. Director
Study team support	Yang Lin	Shenyang SME Development Project Office Assist. Director
Study team support	Wang Bin Bin	Shenyang SME Development Project Office Interpreter
SME support	Xing Yue Yuan	Shenyang ETC SME Office, director
SME support	Cai Yue Wei	Shenyang ETC SME Office,
General Machine	Zhao Yan Jun	Shenyang Machinery Industry Management Office
Automotive parts	Zhu Hong	Shenyang Automotive Industry Management Office
Electronics/Information	Qui Jian Ying	Shenyang Electronics & Information Industry Management Office
Environment Protection	Xu Di Jyn	Shenyang Environment Protection Industry Management Office
Information network	Zhong Jian	Shenyang Industrial Technology Exchange Center, Deputy director
Information network	Li Sheng Zhi	Shenyang Information Construction Management Office, Deputy Director
Credit guarantee	Qi Yongjim	Shenyang Credit Guarantee fund, Chief of Consultation & Service Dept.
Credit guarantee	Gao Hongbin	Shenyang Credit Guarantee fund, Deputy Director
Credit guarantee	Lu Zheng	Shenyang Credit Guarantee fund, Deputy Director
SME service	Yu Bo	Shenyang SME Service Center, General Manager
SME service	Li Yang	Shenyang SME Service Center, Assistant Manager
SME service	Wei Wu Hua	Shenyang SME Service Center, Consultant

CHAPTER 2

SMEs IN CHINA

CHAPTER 2

SMEs IN CHINA

2.1 Current Situation of SMEs¹

Survey into the current situation of SMEs in China has only just begun. The number of SMEs registered with the Federation of Industry and Commerce Administration Management Bureau is more than 10 million, accounting for 99% of all registered enterprises. SMEs in the physical distribution sector account for more than 90% of the nationwide sales points. Both the GDP and the net profit of SMEs is 40-60% of the relevant national figures and SMEs account for 60% of foreign currency earnings from exports amounting to US\$ 150 billion. SMEs provide 75% of the employment opportunities in urban areas with township-village enterprises absorbing 128 million people out of 230 million people in the agricultural sector in the period between 1978 and 1996. In all, SMEs support half of the national economy. SMEs account for 60% of gross industrial production, 57% of sales revenue, and 40% of attained pre-tax profit. In terms of exports, SMEs account for 90% in the physical distribution sector and 60% overall.

One of the major characteristics of the SME establishment process in the last 10 years is the simultaneous growth of diverse ownership types. According to the somewhat old statistics of the national industrial survey conducted in 1995, the breakdown of enterprises by number shows 77.7% for sole ownership business and private small enterprises, 20.1% of collective enterprises, 1.4% for state enterprises and 0.6% for foreign subsidiaries. By production value, collective enterprises account for 51%, one-man businesses and private enterprises for 23.2% and state enterprises and foreign subsidiaries for 13% each. There has been remarkable growth of non-state owned SMEs in the east coastal region.

One noteworthy area has been the development of SMEs in the science and technology sector. Within the framework of national economic development, science and technology based SMEs are responsible for both economic growth and social advancement. There are currently 70,000 such enterprises generating trade turnover of more than 600 billion Yuan per year, and foreign currency obtained from exports in 1998 was more than 50 times higher than that obtained in 1992.

¹ Source: Summarized by the State Economic Development Center in reference to materials compiled based on the results of the Study of SMEs in China, which was consigned by the Research Institute for Development and Finance of the Japan Bank for International Cooperation.

Meanwhile, various problems have become manifest in line with advancing privatization, and it has become necessary to make reforms or establish new sweeping policies and institutions for dealing with enterprises of diverse ownership types. SMEs policies will likely play the role of strengthening across the board functions in contrast to the unique vertically demarcated functions of administrative policy.

The responsible agency for SMEs differs according to the type of enterprise ownership, scale of enterprise and location. Enterprises have a difficult time in handling administration when more than one administrative agency has control.

For example, job responsibility is unclear and multi-faceted control is carried out in such areas as project review and product evaluation. As a result of inadequate service systems in society, provision of understanding and funding with respect to private enterprise product development and markets is conducted in a haphazard manner. Funding for SMEs in particular is very difficult. There are numerous districts where, due to the inability to receive loans, more than 70% of enterprises are experiencing plant operating rates of 80% or less. Cases can also be seen where lack of clarity regarding ownership is hindering corporate efforts.

(1) Overview of Business Analysis of SMEs

As part of the Study of SMEs in China consigned by the Japan Bank for International Cooperation to the Economic Development Center of the State Council, a questionnaire survey of 2,800 SMEs in four provinces (Guangdong, Liaoning, Hubei, Yunnan) was carried out in December 1992 and valid responses were obtained from 1,121 of the enterprises targeted.

The survey contents were mainly related to such items as enterprise business conditions, basic level of enterprises, major issues confronted by enterprises, and requirements, etc. placed on the government and social services by enterprises, and the survey was implemented with the goal of analyzing internal factors and external factors comprising the environment of SMEs.

As a result of analyzing sales turnover, gross profits and assets/liabilities ratio data, the survey indicated that sales turnover of SMEs steadily increased in the period 1995-1997 but then started decreasing in 1998 except for the case of jointly run companies (a type of enterprise in China). When viewed in terms of type of ownership, sector and region, some fairly large disparities can be seen. Looking at profits by type of ownership, deficits are largest in private enterprises followed by state enterprises. In terms of sector, the

consumer goods manufacturing sector recorded consecutive deficits, however, normal profit ratios were maintained by enterprises in other sectors. Profits in the capital goods and intermediate goods manufacturing sectors declined in each year. The assets/liabilities ratio increased every year and reached 84% in 1998. Incidentally, according to the China Statistical Yearbook, the assets/liabilities ratio of state enterprises and state-owned stock companies throughout the country in 1999 is 62%, and that of large and medium industrial enterprises is 60%.

Viewed in terms of type of ownership, the assets/liabilities ratio of private enterprises was 131%, that of state enterprises was 87%, and that of collective enterprises was 49%. In terms of sector, the assets/liabilities ratio of enterprises in the tertiary industry reached 97%. Assets/liabilities ratio was lowest in the capital goods manufacturing sector at 53%, but this was 101% among enterprises in Liaoning Province.

Concerning labor capability, the ratio among all workers of employees with a secondary or specialist school (technical school, vocational school, high school) education is increasing; nevertheless, skill levels remain low. According to figures from 1999, out of the total working population including laborers in rural villages, the ratio of workers with a secondary or specialist school education is 15.7%. Concerning ISO acquisition too, apart from enthusiasm at the Productivity Promotion Center and some factories, the ratio of enterprises having ISO 9000 series certification is 17% on average.

(2) Major Problems Confronted by SMEs

1) Burden created by retirees and laid off personnel is large.

The ratio of working employees among all registered personnel is declining every year.

2) Production/sales ratio, plant-operating rate, product sales route

Concerning plant operating rates, 45.9% of enterprises have an operating rate of 80% or less. Viewed in terms of type of ownership, this statistic is 57.5% among state enterprises and 30.1% among joint ventures with foreign capital. The most commonly given reason for low operating rates is "High product costs detract from competitiveness," and other factors are the impact of fake and poor quality products and lack of marketing methods. Concerning retailing problems, the most commonly cited issue is, "Sales are restricted by the small scale of product markets," and other factors include weak retailing methods, low product profitability or disorderly competition in markets, etc.

3) The low technical level of production equipment is pointed to. This is rooted in the fact that enterprises are state-owned concerns, and the reason is that the market economy is not functioning on production sites.

4) Lack of funds

Comparison of finance sources, profits and assets/liabilities ratio was carried out between the companies that replied that the finance environment is bad or relatively bad, and other companies. The results showed that little difference exists in terms of finance sources but that there were major disparities concerning profits and the assets/liabilities ratio. Also, concerning loan conditions, most enterprises utilize loans of up to 5,000,000 Yuan entailing annual interest rates of 5-8% and loan periods of between 6-12 months.

(3) Business Environment

- Legal systems environment: When asked if the legal rights and profits of enterprises were protected and if swift remedies were available when economic problems or intellectual property rights issues arose, more than 80% of enterprises responded that the situation is “Normal” or “Slightly good”.
- Loan environment: Enterprises have a fairly harsh view of the loan environment. 45.1% of enterprises responded that the environment is “Bad” or “Slightly bad,” while only 3.5% of companies reported it to be “Good”.
- Market environment: When asked if transactions between enterprises are carried out fairly, 80% of enterprises responded “Normal” or “Slightly good”.
- Credit environment: When asked about the credibility of sales credit, 36% of enterprises reported it to be “Bad” and more than 28% responded “Good” or “Relatively good”.
- Social environment: Concerning unreasonable cost recovery, social conceptions of SMEs and provision of services to SMEs by the government sector, more than 80% of enterprises responded that conditions are “Normal” or “Relatively good”.

(4) Company Needs

- Rapid resolution of poor funding environment:

Most of the surveyed enterprises recognized the lack of funds to be an impediment to company development and reached the conclusion that the finance environment makes it difficult to obtain loans. The single most desirable measure for SMEs is that shortages of funds be resolved via improvement of the finance situation.

- The type of information required by enterprises is market information and human resources information.
- The type of know-how required by enterprises is that concerning development strategy:
- Enterprises are mainly in need of development strategy know-how and market and business operating know-how.
- Concerning support from the government sector, information services are needed.

2.2 SME Policies²

2.2.1 Adoption of SME Policies

Since 1978, the Government of China has emphasized the establishment of a legal framework for the economy, constantly creating and enforcing laws and regulations. Laws and regulations enacted to encourage the development of various enterprises, including SMEs, include the “Corporation Law”, “Township and Village Enterprises Law”, Chinese and Foreign Partnership Law”, “Chinese and Foreign Joint Venture Law”, “General Partnership Law”, “Regulations Concerning Collectively Owned Township and Village Enterprises”, “Provisional Regulations Concerning Private Enterprises”, “Opinions on Guidance for Stock Joint Ventures Regarding Municipal Development” and “Some Opinions on Fostering of Small State Enterprises”.

However, since a SME law has not yet been enacted, there have been moves to prepare a basic law to create a systematic legal framework governing SMEs. The Government of China commenced a study on the “SME Promotion Law” in April 1999 and a working group involving the Economic Development Center of the State Council, the State Economic and Trade Commission (SETC) and the Ministry of Finance, etc. aims at promulgating this law in May 2001. Government support for SMEs was prompted by the Asian economic crisis in 1997. New attention is being paid to the role of SMEs as providers of employment opportunities for workers who lost their jobs because of the severe blow of the Asian economic crisis to Chinese enterprises, particularly village and town enterprises, and also because of the restructuring of large state enterprises. The SME survey conducted by the Economic Development Center of the State Council in Zhejiang Province and Jiangsu Province in 1998 found problems associated with property rights as well as such problems as a low social reputation, lack of human resources, poor management ability and family-based management, etc. Based on these findings, the Center put forward recommendations on SME promotion policies in September 1998. Following these recommendations, the mood to foster

2 Source: State Economic and Trade Commission: “Some Opinions on Support and Promotion of SMEs”, July 6, 2000

SMEs increased, resulting in the instruction by Prime Minister Zhu for banks to establish a desk to deal with SMEs. Chairman Jiang also called for emphasis on the development of SMEs as both the central and local governments began to focus on the development of SMEs. Nevertheless, the development of SMEs is still hampered, mainly because of the lingering influences of the planned economy which was practiced for a long time and the traditional attitudes towards business management. Under these circumstances, the Government of China has introduced the series of policies outlined below, including the prompt enactment of the SME Promotion Law, to fundamentally improve the present situation.

- 1) Development of the legal framework and laws, clarification of the SME classification criteria and policy objectives and establishment of SME support systems by government agencies and government-affiliated organizations.
- 2) Establishment and consolidation of an administrative organization to deal with SMEs by means of affording this organization the functions of formulating policies and providing macroscopic guidance and the unification of SMEs, etc. to create a better environment for the development of SMEs.
- 3) Quick proceeding with the formulation and promulgation of the “Opinions on Policies to Encourage and Assist the Development of SMEs” and completion of the policy framework for SMEs.
- 4) Development of the necessary finance system by means of seeking a diversity of fund raising channels, including direct and indirect finance for SMEs, establishment of a venture investment scheme for the establishment of SMEs, establishment of a body to finance SMEs and development of a credit guarantee system.
- 5) Formulation of fiscal policies for SMEs, including direct investment in SMEs, government support measures in terms of lending and taxation and fiscal expenditure on a social insurance scheme for SMEs.
- 6) Establishment of a service system for SMEs by assisting the agencies and private organizations providing services for SMEs and cooperating with the diagnosis, consulting, information gathering, exchanges, market development and human resources development for SMEs.
- 7) Proceeding with the reform of SMEs by means of promoting the reform of state-owned SMEs through mergers, leasing, entrusted management and creation of stock partnerships, etc. and clarifying the property rights regarding assets to create highly efficient enterprises while promoting the simultaneous development of different types of business ownership.

- 8) Encouragement and promotion of the strength of SMEs by means of assisting the development of SMEs to specialist or high-tech enterprises with improved technological innovation capability and market competitiveness.
- 9) Assistance for the establishment of SMEs by the unemployed or those laid off in urban and rural areas to create new employment opportunities.

Based on this policy framework, the SME Department was established and “Some Opinions on Policies Regarding Support and Promotion of the Development of SMEs” was put forward. At present, the SME Basic Law is being drafted.

2.2.2 Some Opinions on Policies Regarding Support and Promotion of the Development of SMEs

The SETC has submitted the following opinions on the national policies in its “Some Opinions on Policies Regarding Support and Promotion of the Development of SMEs” to strengthen the government support for SMEs, particularly high-tech SMEs, and to promote the healthy development of SMEs in line with the spirit expressed by the 15th National Conference of Representatives of the Communist Party of China and the 4th General Congress of the 15th Central Committee of the Communist Party of China. As was described earlier, the SME Basic Law is currently being drafted with a view to its promulgation in May 2001.

(1) Intensified Promotion of Structural Adjustment

- 1) Governments at all levels should make strenuous efforts to promote the structural adjustment of SMEs, fully utilizing the present advantageous opportunity for such adjustment of the economic structure. They should conscientiously implement the already published “list of outdated production equipment, processes and products for elimination” and “list for the prevention of duplicated development in the field of industrial and commercial investment”. At present, the priority SMEs for support by the central government are those to boost science and technology, employment, integrated use of resources, processing of agricultural products, exports and local services. The quality and technological level of these SMEs should be constantly improved together with an increased variety of products to meet the market demands. SMEs which have poor quality or which fail to meet the requirements regarding the prevention of environmental pollution, efficient use of resources and safe operation should be closed down under the appropriate measures based on the relevant laws and policies in China.

- 2) The examination and approval processes regarding the intended establishment of SMEs should be simplified. The competent sections should not be permitted to set any preliminary examination conditions for the registration of enterprises except for the provisions of relevant laws and administrative rules. Simple processes for the restructuring of debt and the bankruptcy declaration of SMEs should be studied with a view to introducing legal systems governing the advance warning of the risk or urged business closure, reconstruction of debt and bankruptcy declaration.
- 3) A policy encouraging the simultaneous development of large enterprises/large group enterprises and SMEs should be adopted. SMEs should be encouraged to develop specialist fields, vigor, uniqueness and new forms or business so that they can cooperate with large enterprises/large group enterprises through the division of work to create industrial linkage where both types of enterprises complement each other. Intensive efforts should be made to support the development of (excellent) SMEs by various means, including the provision of an information service on the experience of various SMEs and model SMEs.
- 4) Intensive support should be provided for the development of SMEs in the central and western regions. The local governments in these regions should be permitted to provide administrative assistance in terms of finance, taxation and land use within their authority to attract both domestic and overseas investors to their regions.

(2) Support for Technological Innovation

- 1) Each government should honestly implement the Decisions on Strengthening of Technological Innovation, Development of High Technology and Realization of Industrialization of the Central Committee of the Communist Party of China and the State Council (Notification of the Central Committee No. 14 of 1999) and should implement the necessary measures, including the establishment of a venture investment fund, to provide effective support for SMEs, particularly science and technology-based SMEs, in terms of improvement of the technological innovation capability and the commercialization of scientific and technological development results.
- 2) The Notification of Regulations Regarding the Transfer and Promotion of Scientific and Technological Development Results” issued by the Public Offices Agency of the State Council (Notification of the Public Offices Agency of the State Council No. 29 of 1999) to the Ministry of Science and Technology and other government offices should be implemented by means of fully exploiting the inducement and

other knock-on effects of the various existing science and technology parks and incorporating the findings of successful experiences of regional or industrial technological innovation service organizations. All of these efforts are intended to accelerate the fostering of model areas for technological innovation by SMEs and industrialization model areas.

- 3) Investors should support SMEs with such productive elements as technologies and the estimated value of these elements can be up to 35% of the registered capital (excepting those cases where a separate agreement is made). State or collectively owned SMEs of which the ownership type has changed may convert a certain proportion of the increased net assets to stock to be awarded to those who have made a special contribution to the conversion as an incentive for such conversion.

(3) Intensified Support by Financial Measures

- 1) Governments at all levels should invest funds within their financial capability, mainly in credit guarantee, assistance for establishment, commercialization of scientific and industrial development results and interest discount for technology remodeling projects, etc., to support the development of SMEs.
- 2) SMEs in which investment has been made by Japanese enterprises and which qualify for a technology remodeling project promoted under a national industrial policy, should be able to enjoy the policy benefit of offsetting their corporate income tax by their investment. Employees who have lost their jobs due to the restructuring of state enterprises and who want to establish SMEs should be entitled to preferential tax reduction measures in line with the national regulations. Urgent studies should be conducted on feasible means of reducing the VAT for industrial enterprises and the tax burden on small-scale taxpayers to support the further acceleration and development of SMEs. Local governments should establish non-profit making credit guarantee organizations based on the national model and the income from this credit guarantee business should be exempt from taxation for three years.

(4) Active Expansion of Loan Channels

- 1) Active support should be provided for stock banks, commercial city banks and cooperative financial institutions in urban and rural areas where SMEs constitute the main client base. Commercial banks, particularly state commercial banks, should assist the establishment of a mechanism to encourage and conclude loans for SMEs although the safety of these loans should be a precondition. These state commercial

banks should guarantee the loans made so that the ratio of loans for SMEs can be steadily increased. Meanwhile, policy-based banks should support the development of highly marketable and economically efficient SMEs in line with the national industrial policy within their existing scope of business.

- 2) The permitted interest rate change for loans for SMEs should be continuously widened. A credit system should be created if necessary and the authority of district-level banks to examine loan applications should be determined in a rational manner to shorten the examination procedure in view of improving its efficiency. Research and development efforts should be made in regard to a lending service which is appropriate for the development of SMEs while the financial services of banks for SMEs, including liquidation, financial advice and investment management, should be further improved.
 - 3) The direct loans channels for SMEs should be gradually expanded with a view to gradually relaxing conditions for the listing and issue of bonds by SMEs. The use of foreign capital by SMEs in the form of joint ventures, partnerships and the transfer of management, etc. should be promoted and should become the normal business practice.
 - 4) Public and private sector investment in SMEs should be supported and efforts should be made to establish a mechanism to create investment companies in venture SMEs and models to manage and withdraw venture investment funds. All related sections should strictly regulate entry into the venture investment market and control the eligibility to uphold the regulatory power of venture investment on the part of the government. The direct involvement of governments at all levels in the venture investment business should be prohibited.
- (5) Acceleration of Establishment of Credit Guarantee Systems
- 1) Governments at all levels and related sections should accelerate the establishment of the state, provincial and district (municipal) credit guarantee systems mainly serving SMEs, particularly high-tech SMEs, in order to create a favorable lending environment for SMEs. There is a strong need for the firm establishment of a market participation system for mortgage organizations, a funding subsidy system, a credit evaluation and control system and an industrial cooperation and independence system.

- 2) Several provinces, autonomous regions and directly controlled cities which meet specific conditions should be selected as model areas for guarantee and re-guarantee activities. Establishment of the National SME Remortgage Organization should be sought with a view to providing guarantees for the SME Credit Guarantee Organization. Development of the SME Credit Guarantee Organization should be accelerated together with the promotion of the development of mutual guarantee between enterprises and of the commercial guarantee business. Separation between the administration and enterprises and market operation should be conducted in the case of SME guarantee organizations with government investment so that all of these organizations are incorporated in local SME credit guarantee systems. The direct involvement of governments at all levels in the credit guarantee business should be prohibited.

(6) Improved Health of Public Service System

- 1) Governments at all levels should change their SME control function and should promote the establishment of a SME service system which mainly covers such areas as loans, credit guarantee, technical assistance, management advice, information service, market development and training of human resources.
- 2) Governments at all levels should provide assistance for the transformation of various scientific and technological research bodies to service centers which mainly serve SMEs in line with the reform of the scientific and technological development systems. Scientific research institutes and centers, universities and various associations should actively assist the development of SME-oriented services to stimulate technological innovation and the commercialization of scientific and technological development results by means of consultations on technology, tenders for patents and parts and training of human resources.
- 3) Systems developed by advanced technologies such as computer networks, etc. should be fully utilized to gradually establish a SME information service system that is open to all to facilitate the access of SMEs to information on policies, technologies, markets and human resources. In areas with suitable conditions, an EC model for SMEs should be established to create the conditions for reducing the market development cost of SMEs.
- 4) Extensive advice on investment and vocational training, etc. should be provided to support SMEs by means of using various methods, including encouragement by the government, subsidies for industry, collaboration between enterprises and

self-reliant training by enterprises. Manager evaluation and recommendations centers should be established wherever conditions are met to develop an exclusive manpower market for SMEs.

(7) Creation of an External Environment for Fair Competition

- 1) The business environment for SMEs should be actively improved. Governments at all levels should introduce laws to annual the various administrative regulations and rules which are disadvantageous for the development of SMEs, taking the situation of their respective areas of jurisdiction into consideration, and should formulate advantageous policies for the development of various SMEs to promote the healthy development of SMEs.
- 2) All local governments and related offices should strictly abide by the Decision of the Central Committee of the Communist Party of China and the State Council Regarding the Handling of Such Problems as Illegal Collection of Fees from Enterprises and Illegal Fines as well as Forcible Payment of Various Contributions by Enterprises” (Notification of the Central Committee No. 14 of 1997) to ensure reduction of the financial burden on SMEs. The rules regarding the management charge, charge on increased capacity for urban water and gas supply and charge on increased electricity supply (incurring additional payment) should be withdrawn in an appropriate manner. The level of the collateral registration fee for SME loans should be lowered. All local governments should consolidate the system to supervise and inspect the implementation situation of withdrawn charges and fees and should propose concrete measures to reduce the financial burden on SMEs operating in their respective areas of jurisdiction. Those who increase the financial burden on SMEs by creating new fraudulent charge items should be arrested and punished without fail. Governments at all levels should set forth certain conditions to encourage large enterprises to use SMEs as subcontractors for the manufacture of some products and parts. At the same time, various regional/local protection measures should be withdrawn to create a market environment in which SMEs and large enterprises can compete with each other on a level playing field.
- 3) Support should be provided for SMEs to conduct their own import and export activities by accelerating the shift from the present examination system to an eligibility registration system by assisting SMEs that meet the relevant requirements to swiftly complete the import/export procedure in view of creating a business environment in which SMEs can compete with international competition. SMEs, particularly those which export high-tech products, should be allowed to enjoy the

preferential measures specified by the Notification Regarding Understanding by the Public Offices Agency of the State Council of the Further Expansion of Exports Through Appropriate Measures conveyed to the Ministry of Foreign Trade (Notification of the Public Offices Agency No. 71 of 1999). The establishment of SMEs by overseas investors or by means of the allocation of dividend-earning stock should be assisted.

(8) Intensification of Systematic Guidance

- 1) Support for and promotion of the healthy development of SMEs are difficult long-term tasks. Governments at all levels and related authorities should maintain their policies of encouraging the liberalization and development of SMEs, lead the market and create an excellent external environment for the development of SMEs by providing support and services. They should intensify the systematic guidance, take their responsibilities seriously and adjust policies and measures for the development of SMEs for the benefit of all. The SETC should play a leading role in the development of SMEs and should establish the National SME Development Promotion Group with the participation of the Ministry of Science and Technology, Ministry of Finance, People's Bank of China and Directorate General of Taxation. The secretariat of this group should be established within the SETC. All local governments should tidy up their control systems for SMEs in line with the reform of the local administrative structure and should clearly identify a new control body as soon as possible to promote the development of the SMEs under their respective areas of jurisdiction.
- 2) All related sections should conduct studies/surveys and should submit a statistical index system that objectively reflects the reality of local SMEs as well as criteria for SMEs as soon as possible.
- 3) The present written opinions shall apply to all types of SMEs including state, collective and private enterprises, stock partnerships, partnerships and one-man businesses. Concrete measures to implement these Opinions should be formulated by the relevant sections under the instructions of the National SME Development Promotion Group.

2.3 Central Government Organization³

The organization chart of the central government is indicated in Fig. 2-3-1.

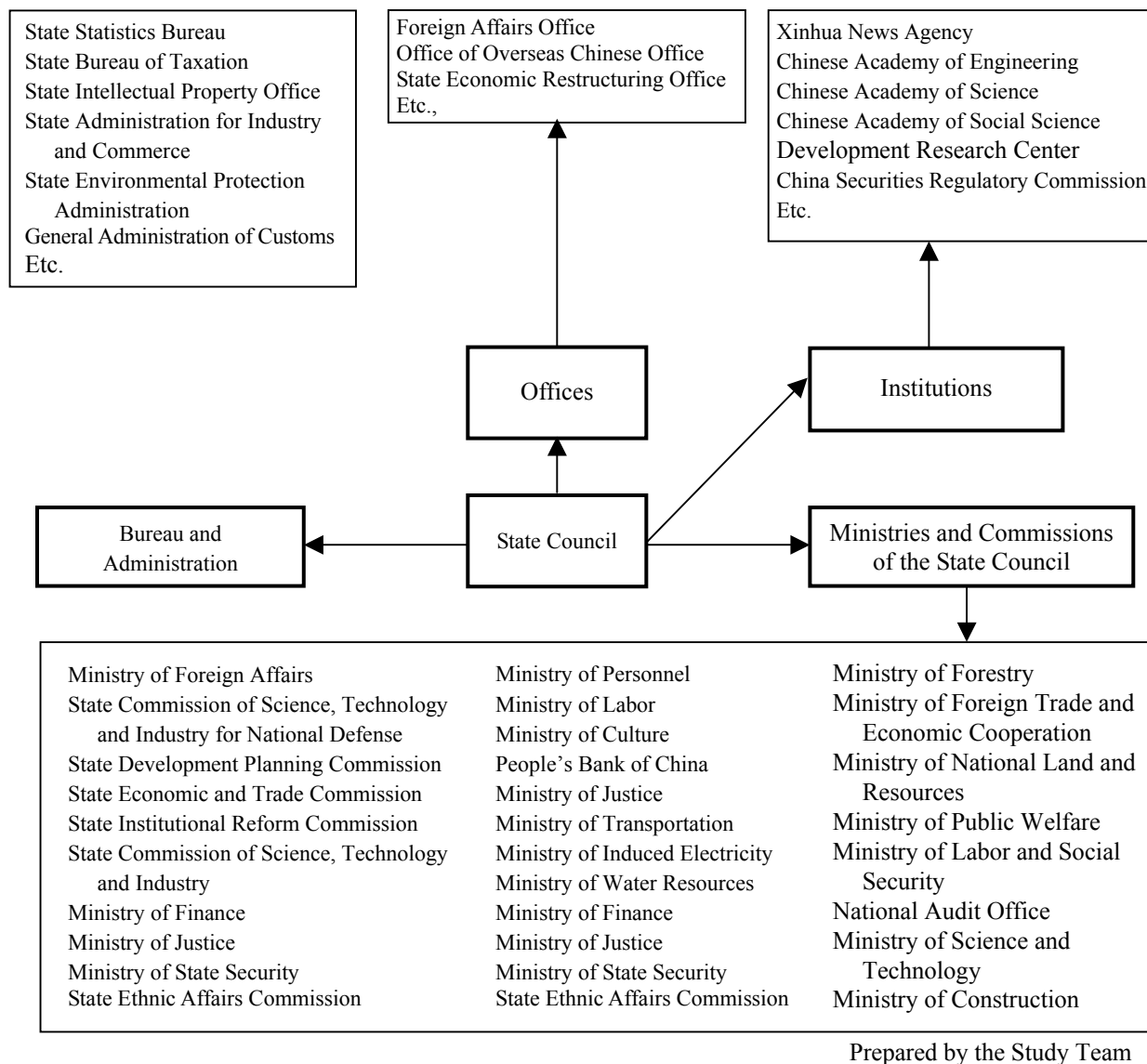


Fig. 2-3-1 Organization Chart of Central Government

³ Prepared by the Study Team with reference to the People's Daily homepage and 'China Information Handbook 2000' (Mitsubishi Research Institute, Inc.)

The organization chart of the State ETC is indicated in Fig.2-3-2. The department of SMEs belongs to this organization.

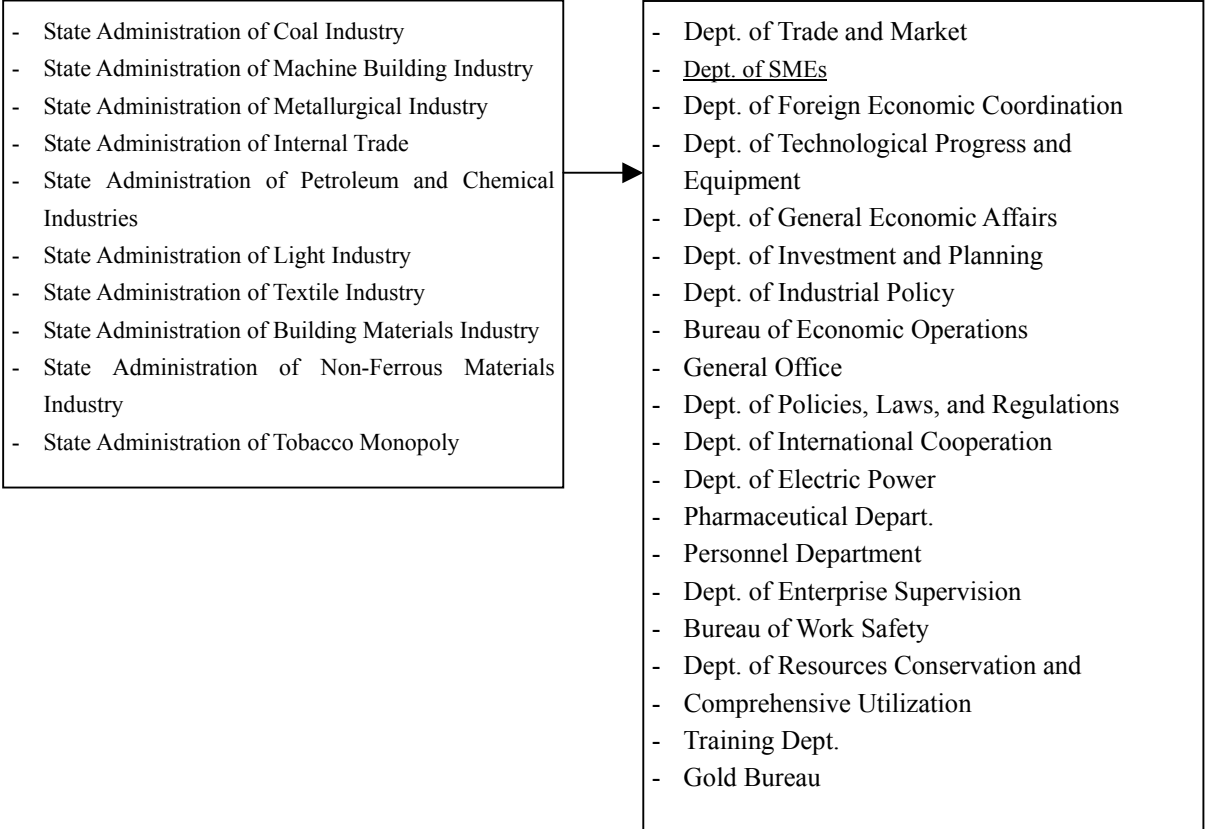


Fig. 2-3-2 Organization Chart of the State ETC

CHAPTER 3

ECONOMY AND SMEs IN SHENYANG

CHAPTER 3

ECONOMY AND SMEs IN SHENYANG

3.1 Current Situation of Macroeconomy and Manufacturing Sector

3.1.1 Land and Population

Shenyang is a major city, boasting the largest municipal population in the northeastern part of China, and has developed as a center for heavy industries. It has a total administrative area of 12,980 km² which is ranked fifth among China's key cities. The municipal population density of 1,375 persons/km² is relatively low.

The natural population growth rate considerably declined in the 1990s and has recorded negative growth since 1998. Accordingly, the growth rate of the total population is showing a declining trend.

Table 3-1-1 Geographical Area of Shenyang

Area	Geographical Area	Area (km ²)	Share (%)
Urban Ward	Heping; Shenhe; Shenhe; Dadong; Tiexi	164	1.28
Suburban Ward	Dongling; Yuhong	1,706	13.14
Suburban Ward	Sujiatun; Xinchengzi	1,625	12.52
Rural Districts	Liaozhong; Kangping; Fakuxian; Xinmin	9,485	73.06
Total		12,980	100.00

Source: Shenyang Yearbook 2000

Table 3-1-2 Gross Population Growth Rate and Natural Population Growth Rate

(Units: '000, %)

Year	Total Population	Growth Rate	Birth Rate	Death Rate	Natural Growth Rate
1990	6,461	1.0	10.9	5.9	5.0
1991	6,501	0.6	7.8	5.5	2.3
1992	6,531	0.5	8.4	5.8	2.6
1993	6,576	0.7	8.3	6.1	2.2
1994	6,624	0.7	8.2	6.3	1.9
1995	6,668	0.7	6.9	6.2	0.7
1996	6,710	0.6	6.7	6.6	0.1
1997	6,738	0.4	6.3	6.5	-0.2
1998	6,748	0.1	5.4	6.5	-1.1
1999	6,771	0.3	5.6	6.6	-1.0

Source: Shenyang Yearbook 2000

3.1.2 Historical Changes of Gross Domestic Product

Following the boom period from 1992 to 1995, the macroeconomy of Shenyang has recorded gradual growth in the last four years. While the production share of tertiary industries is showing a long-term growth trend, its surge has halted just before reaching the 50% level. Meanwhile, despite a declining trend, the share of secondary industries has been maintaining a level of slightly less than 45%.

Investment in fixed assets is slightly below 20% of the GDP and there is an absence of any main players. Investment in fixed assets by state enterprises, which used to account for 85% of the total investment in fixed assets, is now below 50%. The amount of investment in fixed assets by collective enterprises has also declined. This relative decline of investment in fixed assets by state and collective enterprises appears to have been compensated by increased investment by the private sector and foreign capitals which are not included in the statistics shown in Table 3-1-4. One noticeable fact is the substantial increase of investment in private housing in 1999.

The indices relating to consumption have been generally weak. The consumer price index in particular recorded successive negative growth in 1998 and 1999. The growth rates of the disposal income of urban dwellers and workers' wages have been below the GDP growth rate.

These macroeconomic indices for Shenyang are a cause of concern, indicating that the dynamic growth of the city is now a thing of the past.

Table 3-1-3 Trend of GDP Growth Rate (Current Prices)

Year	GDP (RMB billion)	Growth Rate (%)	Share (%)		
			Primary Industries	Secondary Industries	Tertiary Industries
1990	23.45	8.0	10.1	45.7	44.2
1991	25.43	8.4	10.0	44.6	45.4
1992	32.54	28.0	9.0	46.3	44.7
1993	42.52	30.7	8.2	47.0	44.8
1994	55.63	30.8	8.0	46.2	45.8
1995	68.26	22.7	7.5	44.5	48.0
1996	76.44	12.0	7.2	43.1	49.7
1997	85.11	11.3	6.9	44.0	49.1
1998	93.88	10.3	6.9	43.9	49.2
1999	101.32	7.9	6.9	43.8	49.3

Source: Compiled based on data in Shenyang Yearbook 2000

Table 3-1-4 Trend of Investment in Fixed Assets

(Unit: RMB billion)

Item	1990	1996	1997	1998	1999
Total Investment in Fixed Assets	42.5	145.1	165.7	183.8	240.2
Investment by State Enterprises	36.4	115.8	90.7	102.1	115.9
Investment by Collective Enterprises	3.8	11.8	11.8	19.5	9.7
Investment in Private Housing	2.3	13.8	5.1	5.4	18.8
Total Investment in Fixed Assets (%)	100.0	100.0	100.0	100.0	100.0
Investment by State Enterprises (%)	85.6	79.8	54.7	55.5	48.3
Investment by Collective Enterprises (%)	8.9	8.1	7.1	10.6	4.0
Investment in Private Housing (%)	5.4	9.5	3.1	2.9	7.8
Ratio to GDP	18.1	19.0	19.5	19.6	23.7

Source: Compiled based on data in Shenyang Yearbook 2000

Table 3-1-5 Trend of Consumption-Related Indices

Item	1990	1996	1997	1998	1999
Consumer Price Index (%)	2.7	7.9	5.1	-1.0	-2.4
Total Retail Consumption (RMB billion)	10.88	36.55	42.46	47.33	51.61
Growth Rate of the Above (%)	-	23.7	16.2	11.5	9.0
Disposable Income of Urban Dwellers (RMB)	1,674.9	4,352.6	4,713.5	4,931.6	5,365.0
Growth Rate of the Above (%)	-	6.6	8.3	4.6	8.8
Workers Annual Wages (RMB)	2,309.0	5,198.0	5,801.0	6,090.0	6,517.0
Growth Rate of the Above (%)	-	6.1	11.6	5.0	7.0

Source: Compiled based on data in Shenyang Yearbook 2000

3.1.3 Current Situation of Manufacturing Sector

In 1978 when reform and liberalization commenced, the breakdown of the GDP for Shenyang showed 9.1% for primary industries, 65.9% for secondary industries and 25.0% for tertiary industries. The manufacturing industry, which accounted for a predominant share of secondary industries, was the driving force of the city's economic activities. Tertiary industries overtook secondary industries in 1991 when the GDP shares were 45.4% and 44.6% respectively. Throughout the 1990's, their shares little changed as the share of tertiary industries and secondary industries in 1999 was 49.3% and 43.8% respectively. Although the gross manufacturing production has enjoyed two-digit growth, it is probably incorrect to assume that there has been a revival of the manufacturing industry.

According to statistics, the number of manufacturing enterprises totaled 57,679 in 1999 with those with an annual turnover of RMB 5 million or more totaled 1,150 enterprises. The remaining 56,529 enterprises were below this threshold. Those with an annual turnover below

this threshold, however, accounted for 98% of the number of enterprises and 62% of the production value, indicating the strong presence of small enterprises and petty enterprises.

Table 3-1-6 Trend of Gross Industrial Production

Year	Gross Manufacturing Production (RMB billion)	Growth Rate (%)
1990	35.98	-
1993	67.15	23.5
1994	85.09	25.2
1995	87.47	17.2
1996	102.12	15.4
1997	115.01	17.9
1998	133.30	20.8
1999	152.36	18.3

Source: Shenyang Yearbook 2000

Table 3-1-7 Number of Industrial Enterprises

	Number of Enterprises			Ratio (%)		
	Total	Above Threshold	Below Threshold	Total	Above Threshold	Below Threshold
Total	57,679	1,150	56,529	100.0	2.0	98.0
By Type of Ownership						
State Enterprise	475	475	0	100.0	100.0	0.0
Collective Enterprise	5,132	178	4,954	100.0	3.5	96.5
Stock Company	540	44	496	100.0	8.1	91.9
Group Enterprise	35	13	22	100.0	37.1	62.9
Limited Responsibility Company	73	73	0	100.0	100.0	0.0
Limited Responsibility Stock Company	37	37	0	100.0	100.0	0.0
Private Enterprise	3,790	125	3,665	100.0	3.3	96.7
One-Man Business	47,017		47,017	100.0	0.0	100.0
JV with Foreign Capital (Hong Kong, etc. included)	428	205	223	100.0	47.9	52.1
Other Enterprises	152		152	100.0	0.0	100.0
By Heavy or Light Industry						
Light Industry	37,876	441	37,435	100.0	1.2	98.8
Heavy Industry	19,803	709	19,094	100.0	3.6	96.4
By Business Size						
Large	84	84	0	100.0	100.0	0.0
Medium	67	67	0	100.0	100.0	0.0
Small	57,528	999	56,529	100.0	1.7	98.3
By Urban or Rural Industry						
Rural Industry	48,425	0	48,425	100.0	0.0	100.0
Urban Industry	9,254	1,150	8,104	100.0	12.4	87.6

Source: Compiled based on data in Shenyang Yearbook 2000

Table 3-1-8 Production Value by Industrial Enterprises (1999 Prices)

	Number of Enterprises			Ratio (%)		
	Total	Above Threshold	Below Threshold	Total	Above Threshold	Below Threshold
Total	152,355	58,267	94,088	100.0	38.2	61.8
By Type of Ownership						
State Enterprise	17,906	17,906	0	100.0	100.0	0.0
Collective Enterprise	19,775	4,035	15,741	100.0	20.4	79.6
Stock Company	1,654	851	803	100.0	51.5	48.5
Group Enterprise	242	195	47	100.0	80.6	19.4
Limited Liability Company	8,299	8,299	0	100.0	100.0	0.0
Limited Liability Stock Company	10,782	10,782	0	100.0	100.0	0.0
Private Enterprise	17,912	4,375	13,537	100.0	24.4	75.6
Sole Ownership Enterprise	62,688	0	62,688	100.0	0.0	100.0
JV with Foreign Capital (Hong Kong, etc. included)	12,318	11,824	494	100.0	96.0	4.0
Other Enterprises	778	0	778	100.0	0.0	100.0
By Heavy or Light Industry						
Light Industry	63,141	15,492	47,649	100.0	17.4	53.4
Heavy Industry	89,214	42,775	46,439	100.0	47.9	52.1
By Business Size						
Large	31,289	31,289	0	100.0	100.0	0.0
Medium	3,498	3,498	0	100.0	100.0	0.0
Small	117,568	23,480	94,088	100.0	20.0	80.0
By Urban or Rural Industry						
Rural Industry	82,023	0	82,023	100.0	0.0	100.0
Urban Industry	70,332	58,267	12,065	100.0	82.8	17.2

Source: Compiled based on data in Shenyang Yearbook 2000

Industrial enterprises in China are classified in accordance with various criteria, including heavy/light industry, business size and urban/rural industry. Table 3-1-9 shows the current situation of manufacturing enterprises classified on the basis of these criteria. By type of ownership, one-man businesses top the table with a share of 81% in terms of the number of enterprises and a share of 41% in terms of the production value.

By business size, the share of small enterprises is as large as 99.7% with small enterprises accounting for 77% of the total production value. These figures indicate that petty enterprises which are much smaller than SMEs play a crucial role in the manufacturing industry in Shenyang.

Table 3-1-9 Distribution of Industrial Enterprises by Type of Ownership and Business Size (1999)

(Unit: %)

	Number of Enterprises			Production Value		
	Total	Above Threshold	Below Threshold	Total	Above Threshold	Below Threshold
Total	100.0	100.0	100.0	100.0	100.0	100.0
By Type of Ownership						
State Enterprise	0.8	41.3	0.0	11.8	30.7	0.0
Collective Enterprise	8.9	15.5	8.8	13.0	6.9	16.7
Stock Company	0.9	3.8	0.9	1.1	1.5	0.9
Group Enterprise	0.1	1.1	0.0	0.2	0.3	0.0
Limited Liability Company	0.1	6.3	0.0	5.4	14.2	0.0
Limited Liability Stock Company	0.1	3.2	0.0	7.1	18.5	0.0
Private Enterprise	6.6	10.9	6.5	11.8	7.5	14.4
Sole Ownership Enterprise	81.5	0.0	83.2	41.1	0.0	66.6
JV with Foreign Capital (Hong Kong, etc. included)	0.7	17.8	0.4	8.1	20.3	0.5
Other Enterprises	0.3	0.0	0.3	0.5	0.0	0.8
By Heavy or Light Industry						
Light Industry	65.7	38.3	66.2	58.6	26.6	50.6
Heavy Industry	34.3	61.7	33.8	20.5	73.4	49.4
By Business Size						
Large	0.1	7.3	0.0	20.5	53.7	0.0
Medium	0.1	5.8	0.0	2.3	6.0	0.0
Small	99.7	86.9	100.0	77.2	40.3	100.0
By Urban or Rural Industry						
Rural Industry	84.0	0.0	85.7	53.8	0.0	87.2
Urban Industry	16.0	100.0	14.3	46.2	100.0	12.8

Source: Compiled based on data in Shenyang Yearbook 2000

For reference purposes, Table 3-1-10 describes the relevant laws and the characteristics, etc. of different types of enterprises.

3.2 Industrial Estate

3.2.1 Shenyang Economic and Technological Development District

(1) Outline of Development District

The foundation of the Shenyang economic and technological development district was in June 1988, and became an economic and technological district of national class authorized by State Council in April 1993. This Shenyang economic and technological development district is the only development district in the Liaoning ministry, though there are 42 development districts of national class. The place is located at southwest of

city and is along the third high-speed loop line 12km from the center, and a total area is a vast complex of 32km². Site of 4.5km² breadth is under construction as first stage, and site of 7.7km² is also under construction as second stage. The site of third stage being planned hereafter is 19.8 km², and attracting of the enterprise is advanced.

The target of the development district is build up multifunctional, open type, modern and international industrial complex, and it is planed to bring up modern industry which was able to become a leader possessing high new technology so that the secondary and tertiary industry may develop cooperatively. In the range of 150km from Shenyang city, there are seven industrial cities specialized to steel, coal and chemistry as Anshan, Fushun and Liaoyang, etc., and the industrial base is formed in cooperation with Shenyang city. The road and the network of railways develop, and the access to Beijing, Dalian and Harbin is so good. Moreover, the service of a marine transportation (Yingkou and Dalian) and air transportation (Taoxian airport) is convenient. Thus, the development district has rich market of large area and good traffic condition. Moreover, it is scheduled to make the station in the subway in the complex, the access with the city will be improved when it is completed.

The facilities are prepared as eight infrastructures (water supply 60,000 tons, sewage, electricity 300,000kw, heating, information, 1.7 million tons in the distribution warehouse, office and public service facilities). The money more than 1 billion RMB is invested in the infrastructure.

There are three preferential treatment policy, those are the reduction of the enterprise income tax, the preferential treatment to ground development tax and the preferential treatment to land use expense, and there is a preferential treatment plan of 19 item in all. Especially for the foreign capital enterprise, the preferential treatments of the corporation tax and ground development tax reduction, etc. has been installed.

The development district has the administrative power as an independent district similar as the other districts, and offers registration to the industrial and commercial bureau service and one stop service. There is a service center for the bank, information center, the telegraph and telephone, and the labor. Especially, the investment services center is installed for foreign enterprise, and is arranged to complete the procedure and the payment in one window.

The secretariat has made efforts to environmental problems, and acquired environment ISO 14001 in August 2000.

(2) Management of Development District and Type of Business of Participating Enterprise

The income of the development district is 1.8 billion RMB, the number of enterprises is 1,176 companies, and amounts of money of the contract are 58.2 billion RMB. Foreign capital enterprise is 70 percent or more and 860 companies. There are a lot of personal enterprises and private companies in China. The amount of the contract of the foreign capital enterprise 22.8 billion US\$, and the actual use (actual amount of the investment) is 1.2 billion US\$ in it.

The tax incomes are 1.2 billion RMB. Though the preferential treatment policy was insufficient at the establishment time of 1988 and the achievement did not expand, it expanded rapidly and the expansion rate becomes 1.2 times after 1998.

Types of business encouraged to introduce are as follows.

- Electronic industry: Design, assembly, part manufacturing and software development of computer, and telecommunications equipment
- Machine industry: Precision machine, building machine, car, machine parts, and insulating materials
- Medical industry: High effect medicine, anti-cancer drug, medicine for brain blood vessel and electronic medical machines
- New building material industry: New material, skeleton, decoration material, exterior, waterproof material, and heat insulation material
- Petrification industry: Additives, catalyst, new chemical composite, and craft goods
- Infrastructure facilities: Sewage processing, traffic, water supply, commerce and housing, etc.
- Rising industry: Micro electronic technology, new material, new communication technology, isotope, and resource reproduction

The enterprise that actually locates is the following type of business:

- Car: Hino Motors, Ltd. (bus), Toyota Motor Co., Ltd. and Mitsubishi Heavy Industries (engine)
- Medicine: Yamanouchi Pharmaceutical, BASF (joint with Dadong medicine company)
- Microorganism and food: Instant noodle manufacturing, Toitsu, Dingxin, Nonshin, Huafeng, Calbee Ltd., Coca-Cola and Quanguang group

- Chemistry: Michelin and Bridgestone Tire Co., Ltd.
- Others: Jewel processing, construction materials, electronic parts and machine processing, etc.

The average of the amount of the investment is 49.5 million RMB, and the investment enterprises of 1,000 US\$ or more are 180 companies in its.

(3) Introduced Enterprises from Japan

The enterprises advanced from Japan are 64 companies, and there are included a lot of big first class enterprises such as C.Itoh & Co. Ltd., Mitsubishi Heavy Industries, Hitachi Ltd., Sanyo Denki, Hino Motors, Ltd., Yamanouchi Pharmaceutical, the Itokin group, Bridgestone Tire Co., Ltd., Furukawa Electric Co., Ltd., Ebara Manufacturing, and Mitsui & Co., Ltd.. Among those, Yamanouchi Pharmaceutical, Itokin, and the Tanaka precision machine were visited.

1) Shenyang Yamanouchi Pharmaceutical limited company

This company established in October 1994. This company moved here though it located first in Tieling because the development district invited ardently and conditions of location was good. Employees at this headquarters factory are 150 people, and employees are 350 people in the whole company because 11 offices are in whole country, and there are 200 salesmen. The tablet for physician, the capsule medicine and the injection medicine are manufactured, and the raw material is imported from Japan. The product exported to Japan and sold in domestic China. Sales amount is 150 million RMB and increases by 15-20% every year, and it is steady. The product that takes the patent of China is strong. The capital is 35.62 million US dollars and that 95% is Yamanouchi, and 5% is China (Diyi pharmacy).

2) Shenyang Itokin fashion Co. Ltd.

Itokin advances to the Shanghai city in 1989 and installed 18 places of base in China, Shenyang Itokin is the one of them. The woman clothes are manufactured. This company imports the raw material from foreign countries and processes in China, and 80 percent is exported to Japan. Employees are 250 people, and 80 percent is women. The average pay is 600 RMB a month, for the average long service 3-4 years. Production management is done as much as Japan, and is the independent capital enterprise.

3) Tanaka precision machine company

It is a subcontract factory of Nippon Seiko (NSK) that came to this complex eight years ago, and this is paid attention as an example of advancement to a development district such the small and medium-sized enterprise from Japan. They are small and medium-sized enterprises of 26 number of employees which produce rings of the bearing of Nippon Seiko (NSK). As for tools, 70 percent is being brought in from Japan, and this company imports the raw material from Japan and executes middle processing and delivers the products to Japan. Two kinds of 700,000 rings a month are produced. It is said that the Shenyang city was chosen because the climate condition is a place of which rust does not go out besides the cost is low.

It was proposed that the district for the small and medium enterprise should be made in the industrial complex where attraction and promotion of the small and medium enterprise shall be done.

3.2.2 Shenyang National New and High Technology and Industry Development District

(1) Outline of Facilities

It is formally said, “Shenyang national new and high technology and industry development district”. This district consists of development district along the second loop line (Sanhao street, that is Akihabara in the Shenyang city is included) and of another development district in Hunhua district along the third extending loop line beyond Hunhua river in the Shenyang city. The city makes a wide industrial complex at good location about 4km to downtown and about 7km to the airport. The left hand of the expressway which enters to the city from the airport, There are the building of the 21st century and a plaza of the 21st century in the development district that is the symbol of district, and eagerness for the promotion of the science and technology of the city is demonstrated. It is a development district of the national class that was established in May 1988, and permitted by the State Council in March 1991, and there is a history of 13 years. The permission of unitary management descends in 1998, and the one stop service is offered.

At Sanhao Street, 6 research institutes of national level have accumulated up to the time, and 12 universities as Dongbei University and architectural Institute of Technology, etc. are located nearby. Moreover, the Sanhao Street is called a Chinese electronic computer street, customers attract because they can purchase completely everything related to the computer here. Thus, the development district was born in this area to supply necessary

products to customers. It was successful because research and development, production and consumption were integrated.

In this space of 34.2 km², there are Hunnan industrial district (10 km²), Both shore of the strait science and technology industrial district (developed in order to invite enterprises in Taiwan province, 5 km²), Nanta industrial test district (1km²), the building of the 21st century, incubation district for foreign student, software district, bonded warehouse development district (for import and export company), environment protection science and technology industrial district (1km²).

A good environment for the enterprise location is offered as an infrastructure by maintaining flat land to one flat and six services, that is, waterworks, sewage, the road, the communication, electricity, and heating. Moreover, the life side is considered, and the medical treatment facilities, the flower garden (hotel), summer palace (supermarket), hospital, school (primary and secondary school for development district representative's children), and the residence complex, etc. are constructed.

(2) Management of Development District and the Situation of Introduced Enterprise

The 95% of the enterprise that advances to the development district is small and medium enterprise. There is a history of 12 years after it is established in May 1988.

The amount of industrial production in 1999 is 15.7 billion RMB, and is 16.13 billion RMB when the technology export etc. is included. The profit is 1.56 billion RMB before tax. It is an increase rate of 30% a year. The income source of the development district is three of the mediation of the tax (1/4 of state taxes) and the rent and the buying and selling commission. As for local taxes, land, the debt tax, and the acquisition tax enter to the development district. Therefore, it is possible to manage itself independently without receiving the promotion of the city because there is an income of the district.

Number of the company increases every year, and several ten companies advances. The number of enterprises newly introduced reaches 3,000 companies now though they were 400-500 companies in 1995. There are only few enterprises that the first amount of the investment exceeds 10 million RMB, and almost all company starts from a small enterprise. However, they develop fast because of the preferential treatment plan of the district. The joint enterprise of NEU-Alpine grew up to capital assets reaching 1 billion RMB, though started by the capital 20 thousand US\$ in 1992.

The enterprise that advances to the development district is selected limiting to a high-tech area. The selection criterion is the possession of the international high technology or the possession of the product, which has not been developed domestically yet, and the possession of the intellectual property (patent). A technological evaluation of advancing enterprise is examined at the evaluation committee.

In the breakdown of the enterprise of 3,000 companies that advances, first of all, the foreign capital enterprises are 750 companies (USA, Hong Kong, Taiwan, Japan, and South Korea in this order). There are 60 companies from Japan as Toshiba elevator limited company and NEU-Alpine, etc.

Remaining 2,250 companies are the domestic capital enterprises. Seeing from their business field, first of all, an electronic information industry is 60%. The main enterprises are Dongdong (joint enterprise of Toshiba Corporation and Dongbei University), China Legend Co., etc and Sanbao and LG in South Korea etc.

Those are mechatronics 10%, biotechnology relation and medicine manufacture 10%, and new material (metal and Nano- material) 10% excluding an electronic information industry. NEU-software corporation built a building of three stories and 500,000m² in the Hunnan development district, and is a typical software house in this area where 3,100 employees are employed.

The development district has also the incubator function. The one is the 21st building (Shenyang new technology establishment center) and built the floorage 30,000m² building in the large 21st century plaza. The induced enterprises became 80 companies, now.

Another one is establishment district for student from abroad. The industrial complex was built so that the student from abroad who returned home might establish a high-tech enterprise. They make to establish in the incubator here, and the production afterwards is supported according to the growth stage of the enterprise as done in the development district. If it will not be possible to succeed in the time limit of four years, the company has to go out from here.

The contents of concrete preferential treatment for the incubator is settled to lighten the burden at standing up as the rent of office in one year is free at the first year, 30% at the second year, 70% at the third year, and 100% at fourth year.

Moreover, the procedures to the industry and commerce bureau, to local tax affairs bureau and to insurance company are made unify into one window. In addition, multifunctional conference rooms and the Internet, etc. in the 21st century building can be used by a low charge. The financing is occasionally mediated to the bank in financial side. To supplement shortage of mortgage, it will be supplied the property of the development district as the security occasionally.

It reached exports of 300,000,000 US\$ in the example of Sanbao in South Korea last year since the financing support was done, though there is investment and financing in financial support. The venture capital will be the future problem.

Executive of enterprise in the development district is scientific and technological researcher, and is often weak in management. So, it is thought that the ability promotion on the management side is necessary. It is necessary to bring up the manager. The training course for ability will be established in the 21st century building next year, and it is scheduled to learn the success case and to make the enterprise practice done. There is talent mediation center for the company looking for necessary professionals like accountant etc., and it is held "Economic trade business talk association" for a technological exchange and technological development once in September every year.

(3) View for the Future

It is scheduled that incomes will become 30 billion RMB in the next year, though it is 20 billion RMB this year according to the tenth five-year plan. It is also scheduled to increase up to 40 billion RMB when five-year plan is finished (2005). Moreover, it is considered that 50 companies of the excellent enterprise among best 500 companies of the world shall be invited in this development district. The incubator business and the patent income also aim at 10 billion RMB centering on the student from abroad.

It is continued additional enhancement because the development permission of 76km² newly descended from the State Council. It is scheduled to become the fifth municipal district sooner or later.

3.2.3 Dadong Science and Technology Zone

Dadong Science and Technology Zone is the focal point of SME measures in Dadong ward. The municipal economic and technological development zone (above) is located inconveniently 20 km away in the western suburbs, and Shenyang High-tech Industry Development Zone is only intended for high-tech enterprises and thus does not cater to

ordinary SMEs. It was against this background that a miniature industrial zone intended for local SMEs was constructed. Promotion of privatized SMEs requires land, and the aim of this zone is to attract private sector capital by providing this land. As a result of vigorous attraction activities carried out by the ward government, the zone has almost totally been filled by vibrant SMEs which are displaying good performance in their new location.

Dadong Science and Technology Zone is located north of Shenyang East Station, approximately 30 minutes by car traveling northeast from the ward government offices. The Study Team visited the administration office and two factories. One of these was a pipe manufacturing plant, and the other manufactures counterfeit note identification devices. These counterfeit note identification devices are capable of counting paper money and screening counterfeit notes at the same time. Since counterfeit money is prevalent in China, there is a high demand for such devices and this company sells its products all over the country. It enjoys a 40% share of the market in China and production is unable to keep pace with the high demand. This plant has a technical patent and its products have high added value. Its quality systems have received ISO certification, the plant itself is clean, and its production control and technological development setups are firmly in place. The company possesses advanced technology and unique know-how, and it internally produces plastic parts and high added value parts such as molds and dies, etc. while purchasing other cheap parts externally. In this way, the company is well on the way to achieving rational business management. It enjoys a good business record and is a good enterprise.

Dadong Science and Technology Zone is filled with factories and is very lively. The zone authorities are considering attracting overseas enterprises, and Korean enterprises have already set up there. Consideration is also being given to attracting Japanese affiliated enterprises.

3.2.4 Tiexu Industrial Zone

Tiexu ward has a population of 740,000 and covers an area of 39 km². The northern half consists of an industrial zone, and the remaining half is a residential zone. Tiexu Industrial Zone, which was developed from the 1930s, is one of the foremost heavy industrial zones in China. Key industries such as machines, metallurgy, electronics and spinning, etc. are located here and roughly 50 enterprises originated from old Japanese corporations such as Mitsubishi, Hitachi and Furukawa, Sumitomo, etc. There are 567 industrial SMEs (eight or more employees) and these are all privately operated. There are 30 large state enterprises. Number of people working at small enterprises is 10,000.

Intensive investment was carried out at Tiexu Industrial Zone in the first and second five-year plans, and it made a major contribution to the development of industrial zones throughout the rest of China. However, transition from the planned economy to the market economy has not gone smoothly here and as a result, development is lagging due to deteriorated equipment and less competitive products.

Rehabilitation consisting of basic infrastructure improvements was carried out in the seventh five-year plan with the investment of 4 billion Yuan. Some large machine tool plants were renovated into Chinese NC machine tool plants under loans from the World Bank, and these enterprises have been listed on the stock exchange.

Currently in the tenth five-year plan, plans are being formulated for development of Tiexu heavy plant industrial model zone. These plans aim to promote construction of the said model zone while taking advantage of local strengths such as the already established industrial base and available assets, technology and human resources, etc.

- Make full use of information technology and advanced manufacturing technology
- Renovate the conventional plant manufacturing industry and make it more sophisticated
- Accelerate development of the plant industry by promoting information orientation.

The model zone will consist of the NC Machine Tool Manufacturing Center, Power Plant Manufacturing Center, Petrochemical Plant Manufacturing Center, and Mining and Smelting Plant Manufacturing Center.

Large and medium plant manufacturing enterprises in Tiexu Industrial Zone are actively implementing 'twin innovations' (system innovation and technological innovation), and international joint ventures in the fields of science, technology and economy are being carried out on a wide scale.

By making use of new and advanced technology, Tiexu Industrial Zone is being developed as a model zone for revamping of the traditional plant manufacturing industry, a pilot zone for system and technological innovation, and a pioneering zone for vitalization of owned assets.

Priority branches in the industrial zone currently consist of machine processing, power transmission equipment, die machinery, water pumps, pharmaceuticals and chemicals. The rubber industry has been designated as a national priority rehabilitation area.

Air pollution in Tiexu Industrial Zone is within national standards, however, due to the poor image, an iron plant is scheduled to close down and transfer to another industrial zone with an enlarged plant size of 200,000 m² and 20,000 employees.

Promotion of SMEs is being advanced in Tiexu Industrial Zone too. Privatization of state enterprises is being carried out. The city authorities run 18 collective enterprises, however, the current policy is to encourage the folding of struggling enterprises and support creation of new enterprises. There are plans to construct the Credit Guarantee Fund in Tiexu Industrial Zone in July-August 2001. Funding of 10 million Yuan for this will be obtained from the Science and Technology Development Fund. Membership fees of 2,000 Yuan will be collected from 200 enterprises. The purpose of the Fund is to provide operating funds and to support commercialization of good projects.

Consideration is also being given to forming a managers' association and establishing a SME service center based on a membership system.

SMEs support in Tiexu Industrial Zone consists of the following three items:

(1) Provision of Human Resources

Advertisement for human resources, nurturing of managers, preparation of human resources profiles

(2) Technical Consultation

Since an industrial university, science academy, scientific research institute and chemical industrial institute are located in Tiexu ward, the science and technology commission and industrial university should join forces in commercializing development results and matching projects.

(3) Information Services

Provision of information relating to ward government policies and legislation, market needs, company questionnaire surveys, persons wanted conditions, etc.

3.3 Current Situation of Subject Sectors of the Study

Here, the key points of the current situation of the four sub-sectors, i.e. machine industry, environmental protection industry, automobile parts industry, and electronics and information industry, which are the subjects of the Study, are explained. The actual contents are

principally the Summary of the JICA Study Team of the Report on SME Promotion Project in Shenyang compiled by the Economic and Trade Commission and the World Bank Manufacturing Project Office of the Shenyang Municipal Government in May 2000.

3.3.1 General Machine Industry

(1) Outline of the Machine Industry

As the industrial technology and equipment base of the country, Shenyang has so far sold or exported more than 300,000 metal cutting machine tools, 350,000 industrial pumps and agricultural pumps, almost 60,000 gas compressors, 200 million kVA of transformers, and more than 12 million kW of AC motors.

Plant equipment and heavy power products manufactured in Shenyang have been adopted in almost all major construction projects in China, including the Gezhouhao Dam construction works, Bashing Steel second phase works, petrochemical machines with a capacity of hundreds of thousands of tons, and Incan nuclear power plant.

The machine industry in Shenyang accounts for approximately 32% of industrial production and 32% of industrial sector workers according to the Shenyang 1999 Statistical Yearbook.

Machine equipment manufacturing industry: This sector is based around major state enterprises such as Shenyang Machinery Co., Ltd. (machine tools), Mechanical and Electrical Equipment Industry Group, Shenyang Blowing Machinery Group Co., Ltd., (Blowers), Shenyang Mining Machinery Group Co., Ltd., and Water Pump Co., Ltd. In the machine tools industry, efforts are being put into the intensive development of numerical control machine tools, machining centers, flexible units, high precision machine tools, specialist machine tools, and numerical control systems, etc. In the general machinery and heavy industrial sectors on the other hand, priority is placed on developing pumps and valves for power stations and petrochemicals, large fans, hydrogen and nitrogen compressors, hydraulic excavators, mobile belt conveyors, medium speed coal pulverizers, and so forth.

The municipal government hopes to tie in promotion of the SME sector with industrial promotion in the city. In the automobile and machine industries, which are important industries for the city, SMEs are ranked as supporting industries, and it is anticipated that SMEs support development of these industries by becoming reliable parts suppliers to state owned and other major enterprises.

(2) Outline of the Small General Machine Industry

Some enterprises have doubts over whether or not the general machine sector in Shenyang should be classified under the machine industry. Nevertheless, this sector is briefly described as follows:

According to data from the Shenyang SMEs Promotion Project Report (May 2000), Shenyang Municipal Machinery Bureau supervises 123 small machine enterprises, composed of 18 state enterprises, 93 collective enterprises and 12 joint ventures. The small machine sector in 1999 accounted for 21% (4.11 billion Yuan) of total production value in the city's machine industry and 44% (35 million Yuan) of total profits. The reason for the higher ratio of profits compared to production is because of better profit performance by joint venture enterprises. Profit levels are low in both state enterprises and collective enterprises.

The following features can be picked up from these statistics:

- 1) Looking at the ratio between sales turnover/production value, there is a clear disparity between state enterprises (71.0%), collective enterprises (76.3%) and joint venture enterprises (96.8%). This is thought to be indicative of the fact that state enterprises and collective enterprises are still conducting corporate management influenced by the former planned economy. In other words, rather than practicing the market economy principle of only making products that can be sold, it is thought that many enterprises are still unable to break away from management philosophy that places emphasis simply on generating production quantities.
- 2) Looking at labor productivity (10,000 Yuan/person), this is 2.49 in state enterprises, 2.92 in collective enterprises and 20.20 in joint ventures, i.e. the level in state enterprises and collective enterprises is equivalent to just 12.5% and 14.28% of the level in joint ventures respectively. Even assuming that figures do not accurately reflect numbers of actually working employees, it can still be inferred that labor productivity in state enterprises and collective enterprises is only equivalent to between 25 and 33.33% of the equivalent figure in joint ventures.

The following paragraphs analyze current conditions in the small general machine sector based on the findings of company visits and diagnoses carried out at 11 enterprises in the sector. Although it is not possible to draw conclusions for 123 enterprises based on findings from just 11, it should be possible to draw some pointers for future improvement of the general machine industry in Shenyang.

(3) Analysis of Visit Surveys of 11 Companies in the General Machine Sector

Status of the general machine industry sector among all the surveyed sectors can be summed up as follows.

Business capability assessment:

A (standard or above)	: 3.5 or more
B (standard)	: 2.5-3.4
C (inferior)	: 2.4 or less

1) Overall Mean

The average score in the general machine sector was 2.31, which was the lowest score among all the sectors. In the current situation, the number of companies that can survive following affiliation to the WTO (A rank) is zero, and there is a high risk that 3-4 companies will not survive. Two or three companies will need to make a determined effort in order to survive, and the other 4-7 are on the threshold and will probably not survive unless they receive some kind of financial and technical assistance. This situation is closely linked to the fact that six of the 11 surveyed enterprises are state enterprises and five are collective enterprises (there are no privatized companies), and conditions surrounding these types of enterprise have already been clearly set out in the above data from the Shenyang SMEs Promotion Project Report.

2) Human resources item

The general machinery sector had the next highest ratio of low C scores following the electronics and information sector. This is due to the fact that many companies are unable to recruit new personnel due to lack of funds, and there are few managers who have an acute awareness of the shortage of human resources and the need for in-house human resources development. (A number of companies reported that human resources only move on after receiving in-house training).

3) Financial capacity item

The general machinery sector had the highest ratio of low C scores. More than half of the companies have experienced zero profits or deficits over the past three years, and more than 80% of enterprises are unable to conduct plant investment due to lack of funds.

4) Production and sales capacity item

The general machinery sector had the highest ratio of low C scores. Labor productivity (sales turnover per worker) is less than half that in the automobile parts and electronics and information sectors.

Small machinery products manufactured by the companies surveyed include vacuum pumps, valves, belt conveyors, clutch friction plates, motors, ladder trucks, hydraulic machines, etc. Even though each plant makes unique and characteristic products, general items of equipment such as lathes, drilling machines and milling machines are not adjusted or changed at all following purchase and are continuously manned by one operator. It is thought that this mode of operation has been continued by companies even following the transition to a market economy.

5) Business planning capacity items

The general machinery sector had the highest ratio of low C scores. Concerning sales destinations, two of the 11 companies surveyed sell 40-50% of their products to foreign countries. The remaining companies sell at least 50% of their products within Liaoning Province and the northeast region, and three companies conduct 80% or more of their sales within Liaoning Province. One enterprise shorted its operating hours in February 2001, and in another extreme case one enterprise suspended operation in October 2000.

In consideration of these conditions and the results obtained under each assessment heading, it is necessary to bolster financial capacity, human resources development, business planning capacity and production and sales capacity in the general machine sector.

(4) Problems in the General Machine Sector

1) Low profitability

Four companies which have experienced zero profit or deficits over the past three years are still managing to survive. Another three companies have not been in the red but have experienced sales less than capital for the past three years. These companies, too, continue to operate. Because enterprises still retain some of the character of state enterprises, they are unable to be fully self-supporting and lack business-planning capacity.

2) Low productivity

Upon conducting work analysis on a certain task, it was found that less than 20% of work actually generates any added value. This means that, if the working day consists of eight hours work, only around one hour of that time produces any added value. More or less the same results can be assumed upon observing work at all the surveyed enterprises.

3) Human resources development

New personnel cannot be recruited due to lack of funds and work forces are aging. In these circumstances, only a few managers are taking steps to tackle the issue of human resources development that is responsive to the changing environment that surrounds enterprises. This situation is linked to the fact that enterprises do not possess in-house education plans including OJT.

(5) Solutions to Problems

1) Promotion of Shenyang Reform Plan for encouraging autonomy of enterprises

- a) Resolution (privatization) of asset ownership problems
- b) Establish a system of stimulus measures and restrictions, and promote transition of enterprise internal systems via reform and strengthening of internal controls
- c) Resolution of fund raising difficulties
- d) Bolstering of bankruptcy proceedings, mergers and suspension/closure of production

2) Raise productivity

In order to build a setup for making good products cheaply and on time, first promote improvement of manufacturing line environments.

- a) Eliminate wasteful work actions through carrying out thorough work improvement.
- b) Develop methods and improve and develop equipment suited to each product and part.
- c) Eradicate NGs and reworked products.

3.3.2 Automobile Part Industry

Some automobile parts enterprises in Shenyang have not yet reached the level where they are able to supply satisfactory products to key car assembly enterprises in the city, which is a center for small car production in China.

The following sections describe current conditions in the SME automobile industry sector in Shenyang based on the findings of company outline questionnaire analysis and company visits and diagnoses.

Needless to say it is not possible to arrive at sweeping and definite conclusions concerning the automobile parts sector in Shenyang based on survey of 11 companies out of a total of 93 (12%). Having said that, the following information should prove useful for establishing the future direction of improvements.

(1) Outline of Questionnaires Survey for 11 Enterprises

As is indicated in Table 3-3-1, analysis was carried out on the status of the automobile parts sector based on the perspective of 12 items.

Table 3-3-1 Analysis of Automobile Parts Industry Based on Financial Statements

		Average for 55 Enterprises in Four Sectors	Average for 11 Enterprises in Automobile Parts Industry	Status
1	Situation of privatization	38%	64%	Advanced
2	Capital Total assets Ratio of net worth to total capital	RMB 20,000,000 RMB 56,000,000 35%	RMB 16,147,000 RMB 69,132,000 23.3%	Nearly average Slightly above average Low
3	Number of employees actually working	240	334	Slightly higher than average
4	Total turnover Turnover on previous year	RMB 19,000,000 100%	RMB 23,000,000 138%	Second ranked Excellent
5	Turnover ratio of capital	0.422	0.34	Third ranked; poor
6	Gross profit on sales Ratio of gross profit to sales	RMB 350,000 -9.3%	RMB -2,349,000 -9.9%	Lowest ranked Noticeable loss; very poor
7	Ordinary profit	- (no data)	RMB 77,000	Poor with hardly any profit
8	Average monthly wage of employees	RMB 564	RMB 607	Third ranked
9	Amount of tax paid	RMB 660,000 10 out of 55 did not pay tax	RMB 849,000	Average; worst profitability
10	Fixed cost Plant and equipment investment	RMB 2,800,000 RMB 6,000,000	RMB 5,761,000 (weakening) RMB 25,812,000	Unrivalled; double the average Unrivalled; more than four times higher than average
11	Long and short-term borrowing Long-term borrowing Short-term borrowing	RMB 5,250 mil. RMB 5,009 mil.	RMB 17,584 mil. RMB 17,897 mil.	More than four times higher than average Unrivalled; nearly four times higher than average
12	Site area and building floor area Site area Building floor area	30,000 m ² 16,000 m ²	29,000 m ² 10,000 m ²	Third ranked Second ranked; appropriate

1) Privatization

Privatization is advancing more in the automobile parts sector than in other sectors. However, the vestiges of state enterprise operation still linger a lot.

2) Capital, total assets, own capital ratio

Capital and total assets are at average levels, while the own capital ratio is slightly lower than average. This is because profit efficiency is poor, internally retained profits are not accumulated and enterprises are unable to break away from dependence on loans.

3) Number of actual workers

Enterprises will not be able to achieve development unless they and the government take measures to reduce the work force burden. Examples of such measures would be to eliminate later burden by clarifying controls and making temporary payments, or by stopping or reducing pensions by arranging new work opportunities for released personnel.

4) Total sales turnover, and sales turnover compared to the previous year

Total sales turnover in the automobile parts industry is higher than the sector-separate average. Annual fluctuations in sales turnover are large; for example, sales turnover in 1998 and 1999 was 138% and 40% higher than in the previous year respectively, however, this is a temporary phenomenon and will not likely be sustained.

5) Capital turnover

Capital turnover of at least three or four times is required per year, but the level in the automobile parts industry is low. This is largely the result of unique conditions in the industry whereby companies only supply to set customers.

6) Gross margin and gross profit margin

The large gross margin deficit of 2,349,000 Yuan is because sales are not expanding in relation to plant investment. Because enterprises are unable to develop attractive products, they have to adopt a passive stance of manufacturing in accordance with new drawings furnished by their customers.

7) Ordinary profit

Ordinary profit is at zero level. Reasons for this situation are low sales turnover, a high ratio of personnel and plant expenses among fixed expenses, and also the structurally low profitability constitution of enterprises.

8) Employee salaries

The monthly salary of 600 Yuan is slightly lower than the current salary level in China. If the same salary setup is adopted for temporarily laid off workers and retired workers, enterprises cannot withstand the burden of personnel expenses. More rational personnel expenses measures should be reviewed.

9) Paid taxes

Paid taxes in the automobile parts industry are at the sector average level. The profit setup of enterprises is extremely poor and leads to low tax payments. Moreover, out of the 55 companies surveyed in the four target sectors, 10 companies (18%) paid no taxes.

10) Fixed costs, plant investment

Since the automobile parts industry is a plant intensive sector, fixed plant costs are very high and adversely affect the profitability of enterprises.

Due to the production setup that relies on production equipment, plant investment in this sector is more than four times higher than the average in all sectors. Having said that, deterioration of plant equipment is conspicuous and major doubts arise over the contradiction with the large plant investment reported in the questionnaire.

11) Long and short term loans

Long-term loans are more than four times higher than the sector average, and short terms loans are just under four times greater. When state enterprises were privatized, large debts were transferred in addition to assets, and the size of loans indicates that this situation has hardly been remedied at all.

12) Site area and building area

Enterprises in the automobile parts industry have enough site area and building area to carry out corporate activities.

(2) Analysis of the Company Visit and Diagnosis Surveys

Analysis is carried out on three weak points that became apparent, i.e. weak technical capability, shortage of effective human resources, and weak financial content of the profit setup.

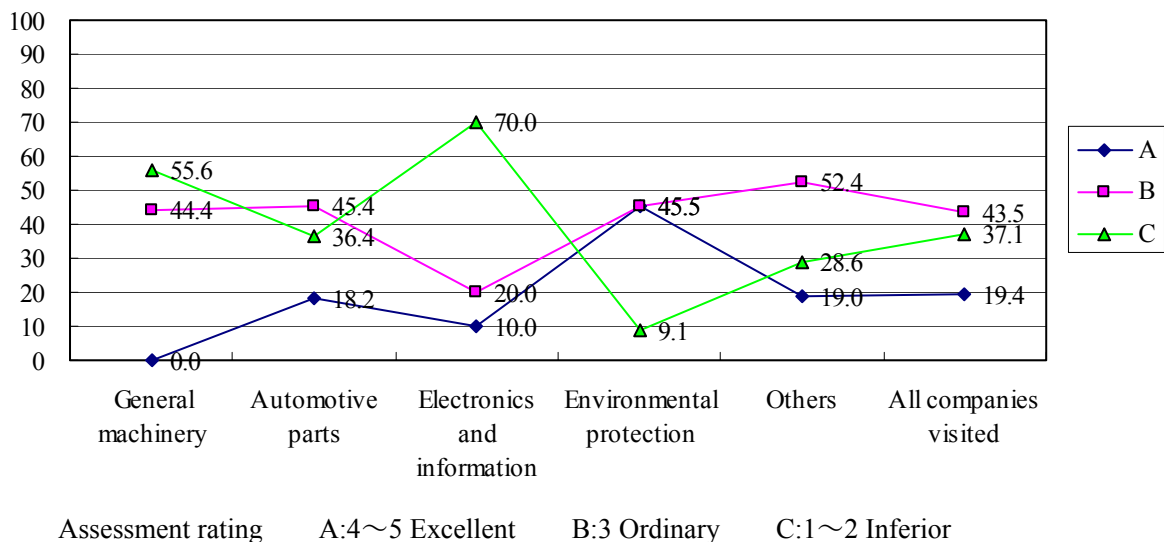


Fig. 3-3-1 Assessment of Business Capacity by Sector

The automobile parts industry had the lowest score behind the electronics and information sector and the general machinery sector. In the current situation, the number of companies that can survive following affiliation to the WTO (A rank) is one or two, and there is a high risk that three or four companies (approximately one-third) will go out of existence in the near future. The remaining 5-7 companies are on the threshold and need to fight for their existence.

Distribution of the business capability assessment of 93 companies in the automobile parts sector in Shenyang can be surmised from the survey findings for 11 enterprises.

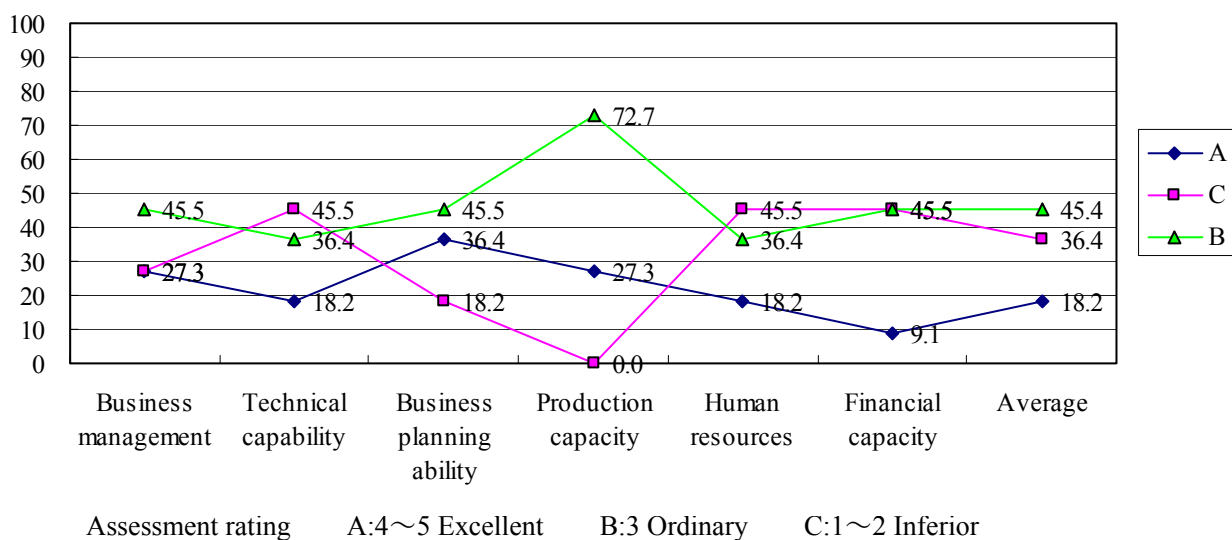


Fig. 3-3-2 Assessment by Item of Automobile Parts Sector

The automobile parts industry is faced with weak development technology capability, shortages of effective human resources, weak business planning capacity and fragile financial constitution. The industry possesses good production capacity, however, it does not have the setup to produce competitive high quality products.

1) Weak technical capability

Enterprises are not endowed with the functions they need to operate as company concerns. In other words, they have no research and development setups for specifically realizing plans that are vital to company survival.

In the current situation, enterprises make prototypes based on drawings for new orders provided by their customers, and they call this new product development. However, this is not research and development.

2) Shortage of effective human resources

In the current situation, most enterprises depend 100% on the capability of their presidents to provide the driving force for their business operations.

In the area of business administration, enterprises have no short, medium or long term project plans, whereas in the area of finances, although administrative accounting is required in addition to financial analysis, this too does not exist. Concerning planning, there are no qualified personnel and no functions for determining how product plans should be incorporated into operating plans and for conducting research and development after plans have been received. There are currently no human resources to whom such work can be entrusted. In terms of production, there are no leaders capable of bringing together cost and efficiency; and no qualified persons can be found in the area of sales and marketing too.

There are no education plans for nurturing human resources. It is necessary to implement and review the achievements of strata-based education consisting of basic learning and practical education.

3) Weak profit creation setup

In the absence of monthly financial totaling and problem analysis, a) in the area of design, there is lack of review to consider how much costs are taken into consideration, and b) in the area of manufacturing, analysis and causal investigation of low productivity and quality problems are neglected.

(3) Direction of the Solution

1) In order to exhibit strong technical capability:

In order for enterprises to clarify the current status of their products, they should implement comparison with competitors and take measures to bolster weak areas that are identified. Moreover, basically speaking, enterprises must establish setups for developing new products that are planned based on operating plans, and for this purpose they must recruit the necessary engineers and implement planned education programs consisting of basic and practical courses.

2) Setups to realize strong profit

Enterprises should establish a system for computing and reporting in real time manufacturing cost per product, and they should share cost awareness. Enterprises also need to raise productivity, raise quality conformity rates and check store conditions and procurement costs. In particular, it is necessary to establish systems for showing up areas of waste and unfeasibility.

Wasteful areas that require particular review are continual generation of defect parts, need for higher yields, disposal of defect stocks, waste caused by inappropriate work manuals, and so on, and everyday review is essential.

3.3.3 Electronics and Information Industry

(1) Outline of Electronics and Information Industry

The electronics and information industry comprises of three branches as electronics/information industry manufacturing, IT servicing, and communication software industries.

At present some 500 enterprises are said to be registered in this industrial category, although the relevant statistics indicate the presence of 165 enterprises with total assets of more than RMB 10 billion. Ten leading large companies which have recorded rapid growth in recent years collectively account for almost 84% of the total production value of this industry.

LG Co., Ltd., a Korean company, locally manufactures color television sets. It is described as a good example of a company which has stimulated the development of SMEs as it uses 76 domestic parts suppliers.

(2) Main Current Problems

The Report points out the following four problems, although none of them appear to be serious:

- 1) The advantages possessed by this sector in terms of market competition are not manifested.
- 2) The industrial base is relatively weak.
- 3) Many state enterprises are experiencing fund shortages and have a high level of liabilities.
- 4) While telecommunications and information technology-related enterprises and equipment manufacturers are rapidly growing, information service providers have been slow to develop.

(3) Direction for Development

Both information and telecommunications are business fields which are expected to continue rapid growth in Shenyang in the coming years, and there are many development projects in all related aspects. The planned establishment of a 3Cs industrial structure is described below because of its assumed close link with SMEs.

3Cs means computers, communication and consumer electronics and the plan is to create a group of parts suppliers for local plants of foreign subsidiaries producing personal computers and color television sets, etc. for the purpose of enhancing the general competitiveness of SMEs through industrial linkage.

3.3.4 Environmental Protection Industry

In China, environmental protection is ranked alongside population control as a basic national policy and a formidable environmental protection setup incorporating the Constitution, Environmental Law, Individual Project Implementation Law, Environmental Standards, regional legislation and international conventions, etc. has been developed. The whole nation is making a concerted effort to deal with the serious environmental problems that confront it, however, because of problems in terms of economic factors, technical factors and lack of awareness of environmental issues and legislation, it is pointed out that environmental protection measures are not adequately functioning, indeed it has been said that measures have even struggled to prevent environmental deterioration let alone realize environmental improvement and environmental protection.

Meanwhile, environmental protection industry measures have played an important role as one element of industrial policy in recent years. Areas where the environmental protection industry has a straight right of decision over market size and quality are environmental protection policy and environmental protection administration. This is the point, which greatly differentiates the environmental protection industry sector apart from other industrial sectors. Accordingly, it is necessary for the State Environmental Protection Administration, which is in charge of environmental protection policies and measures, and the Environmental Protection Industry Office, which is in charge of measures, to work closely in producing concrete results in the area of environmental protection. That is to say, for the sake of environmental protection policy and environmental protection administration, in addition to gauging the level of technology and willingness in the environmental protection industry, raising the level of environmental and legal awareness among the general public is essential in order to overcome environmental measures that are simply ineffective.

(1) Outline of the Environmental Protection Industry in Shenyang

Since the Study was implemented from the perspective of exploring measures for promoting SMEs, it does not target environmental protection policies and policies for the environmental protection industry which also includes major corporations. Accordingly, the following sections give a brief outline of the environmental protection industry sector as investigated in the course of the Study.

1) Environmental Protection Industry Office

In 1997 Shenyang was ratified as a “national environmental protection industry base and an experimentation site for water treatment plant development”, and following this in February 1998 the Environmental Protection Industry Office was set up inside the State Environmental Protection Administration with a staff of six. Then in February 1999, this became the Shenyang Municipal Environmental Protection Industry Office under the direct control of the municipal government, and at this time it became a bureau-level organization consisting of 24 personnel and four departments (general affairs, cooperation, development, process).

2) Definition of the environmental protection industry

The environmental protection industry is defined as covering the following five areas:

- a) Environmental protection products: manufacturing of equipment for treating wastewater, waste gas and solid waste products

- b) General utilization of resources: manufacturing of bricks from coal ash, etc.
- c) Technical services: consulting, scientific research, greenification planning, environmental observation, etc.
- d) Ecological protection: recovery and protection of farmland, forests, plains and soil, etc. from pollution (forest plantation, etc.)
- e) Low pollution products: green foods, biodegradable containers and packaging (prevention of white pollution), non-phosphorous detergent, freon substitute products, etc.

It is not clear what kind of promotion measures are available (and how those measures are connected to SMEs) in common areas or individual areas, and no conclusions were drawn after continuing investigation in the second field survey.

3) 1999 production value

According to the 1999 statistical table of basic conditions among 122 environmental protection companies in Shenyang and 'Current Situation and Analysis of Environmental Protection Industry Development in Shenyang,' when viewed in terms of the overall environmental protection industry sector, in 1999, there were 122 enterprises with total production turnover of 2.9 billion Yuan and profits of 420 million Yuan, representing increases of 96% and 62% over the previous year respectively. However, there is doubt whether these figures cover the whole industry, i.e. not all the visited and surveyed enterprises in the environmental protection industry sector are included in these statistics.

The number of enterprises and production turnover in each of the five areas of the environmental protection industry are indicated below.

Table 3-3-2 Number of Employee and Production Amount of Enterprises
in Five Business Domains

	Business domain	Number of enterprises in the domain	Share of 1999 total production amount of 2.9 billion Yuan (Unit: 1 million Yuan)	Number or enterprise of no production
a	Equipments for the environmental protection	49	1907 million Water processing 1621 Special Equipment 1430	6
b	Technical service	18	97	0
c	Comprehensive utilization of resources	41	466	3
d	Nature and ecology protection	3	43	1
e	Products of low pollution, and others	11	388	1

Out of the total production turnover of 2.9 billion Yuan generated by the 122 environmental protection industry enterprises in Shenyang in 1999, environmental protection equipment products accounted for 1.9 million Yuan or 66% and 1.43 billion Yuan of this was accounted for by special environmental products. This is equivalent to 75% of all environmental protection equipment products and roughly half of total production turnover in the environmental protection industry.

In the area of environmental protection equipment products, leaving aside sanitary sewage treatment equipment, air environment-related equipment such as dust removers, desulfurization and denitration equipment, etc. and other equipment (incinerators, etc.) account for a relatively small share of 15%. Moreover, out of 11 enterprises that had zero production, half were manufacturers of environmental protection equipment products.

Out of the 122 enterprises in the environmental protection industry sector in Shenyang, the top five producers in 1999 are indicated below.

Table 3-3-3 1999 Production Data of 122 Enterprises in the Environmental Protection Industry

(Unit: 1million Yuan)

		Amount of sales	Amount of profit	Profit margin (%)	Product domain	Number of employee	Ownership type
1	Syenyang special environment	1427	337.54	23.7	Equipment	1,005	Stock holding
2	Shenyang fuel group	300	2.00	0.7	Low pollution	2,092	State-owned
3	Shenyang three star copper materials factory	125	0.60	0.48	General utility	220	Stock holding
4	Dongyu environment engineering company	106	23.26	21.90	Equipment	248	Joint venture
5	Shenyang heavy machinery factory	73	3.17	4.30	Equipment	472	State-owned

Many of the 11 visited enterprises adopted their current organizational setup in 1998-1999. Annual sales turnover could be measured for the two years of 1998 and 1999 in just three enterprises. As for the remainder, turnover in just 1999 was measured in three enterprises, turnover in the limited period of January to September 2000 was measured in three more, and it is still not possible to obtain sales data in another two enterprises (forecast sales turnover in 2001).

Some of the surveyed enterprises were created as environmental protection industry concerns, however, the majority were registered as SMEs after breaking away from major corporations to deal with environmental protection areas.

4) Shenyang Special Environment Protection Equipment Co., Ltd. and Shenyang Environmental Protection Equipment Collective

The environmental protection industry has a short history as an industrial sector and the role of SMEs and large enterprises (currently just Shenyang Special Environment Protection Equipment Co., Ltd.) is not always clear, however, in the area of environmental protection equipment products, a group of 18 enterprises (Shenyang Environmental Protection Equipment Collective) has been organized

around Shenyang Special Environment Protection Equipment Co., Ltd. and has received orders for a number of large scale urban domestic wastewater treatment plants.

In the area of special environmental protection equipment, items such as motors, compressors, pumps and high-pressure breakers, etc. are ordered externally, but other products can be manufactured internally. There are 31 external subcontractors, however, orders are placed with enterprises in other cities if these suppliers are not good enough. In consideration of the current situation of SMEs in Shenyang, there is no choice but to order outside the city in some cases (a kind of functional purchasing).

Furthermore, there are cases where units which can be internally produced are also ordered out. This is done on instructions from the Environmental Protection Industry Office in order to facilitate overall coordination.

In a report of development of the environmental protection industry in Shenyang given by the Environmental Protection Industry Office in the Shenyang SMEs Promotion Project Report, it is stated “Development of the environmental protection industry in Shenyang will be supported using various measures based around the Special Environment Protection Equipment Co., Ltd.” This is regarded as an important feature in construction of the environmental protection industry base in Shenyang and it is stated that financial subsidies will be furnished to the Special Environment Protection Equipment Co., Ltd. and that preferential measures will be taken to guarantee increase in stock revenue. The impression garnered within the scope of the Study was that in reality these are the only measures available to promote the environmental protection industry.

(2) Problems in the Shenyang Environmental Protection Industry

1) Enterprises with zero production value

Out of 122 enterprises in the environmental protection industry, 11 had zero production value in 1999, and apart from Shenyang Biodegrading Technology Co., which received diagnosis and guidance as a model enterprise, actual conditions at these companies are unknown. This sector has a short history and there are enterprises such as Shenyang Luhuan Biodegrading Technology Co. which are in the midst of technological development or have only just been created, however, whether or not this is the case with all enterprises is one of the problems.

2) Types of environmental protection equipment products

Sanitary sewage production equipment products account for 85% of the total production value of all environmental protection equipment products, while the remaining 15% is accounted for by dust removers, desulfurization, denitration, air environment-related and other equipment (incinerator equipment, etc.).

According to the report of development and work in the environmental protection industry in Shenyang, the State Environmental Protection Administration in 1997 ratified Shenyang as a national environmental protection industry base and an experimentation site for water treatment plant development. This is a natural outcome since the same report also states, "Priority directions for the environmental protection industry are development of industrial wastewater and urban domestic wastewater treatment technology and plant equipment development; therefore, support should be given to countermeasures against solid waste, air and noise pollution and development of various areas such as general recycling, etc. However, a problem that will arise when considering environmental protection equipment in the future concerns the question of how priority policy directions and predetermined wastewater treatment methods will aid multi-faceted development of the environmental protection industry".

3) Sluggish mergers and joint ventures

The overwhelming majority of visited SMEs in the environmental protection industry hope to form tie-ups or joint ventures with foreign affiliates, however, none of the enterprises have actually realized this. For foreign capital too, the Chinese market is certainly attractive, however, there is not considered to be much appeal for foreign affiliates in conducting tie-ups with SMEs as compared to major enterprises. In reality, the Special Environment Protection Equipment Co., Ltd., which is the only enterprise to have so far benefited from the environmental protection industry promotion policies, is conducting technical cooperation and tie-ups with European and American companies. Unfortunately, however, links with Japanese capital have not yet been established.

4) Spin-offs from major enterprises

In enterprises which were registered as SMEs after initially breaking away from major enterprises as the environmental protection divisions of these companies, it is still early days, however, areas where these enterprises act more like subsidiaries of parent companies rather than independent concerns can be seen. Frequently

occurring problems are those surrounding fund raising, staff recruitment and tax payment, etc.

5) Problems cited by the Environmental Protection Industry Office

- a) Development of systems and diverse technical processes for achieving local production and plant handling of sanitary sewage treatment equipment is unable to keep pace with burgeoning demand. Moreover, locally produced equipment lags far behind foreign products in terms of treatment efficiency, energy consumption efficiency and reliability.
- b) Because of regional protectionism and market division within China, enterprises have great difficulty in developing markets and are confronted with complicated competition.
- c) Unified and consistent policies and legal systems for industrial encouragement, investment and loans and market competition are not yet fully in place.

(3) Resolution Measures and Policy Direction

1) Concerning cost performance

Since environmental protection industry policies and environmental protection policies are basically two sides of the same coin, the measures proposed here are more aptly described as environmental protection policies rather than environmental protection industry policies. Whether it is sanitary sewage treatment or waste gas treatment, it is important to achieve higher performance, however, if advanced but expensive imported technologies and equipment are sought, equipment costs and operating cost performance will exponentially deteriorate. Large quantities of good cost performance equipment should be immediately adopted using the current local technology. Certainly in some areas, some advanced technologies and systems from the rest of the world should be adopted on an experimental basis with a view to future utilization, however, to force a similar approach in all areas would be unrealistic in terms of both environmental protection policy and environmental protection industry policy.

2) Recommendations for the environmental protection industry

It is thought that Shenyang City has so far fostered a special environment in anticipation of rapid growth of the environmental protection industry. The following recommendations are made with a view to achieving even greater growth.

- a) Further technological improvement and industrial development in, for example, the machine industry that has been built up in Shenyang

In particular, in order to further enhance the technical capability of traditional key industries (including both large and small enterprises) centered around machines and electricity which have formed the basis of sanitary sewage treatment equipment, the environmental protection equipment industry, in which major growth can be undoubtedly be expected in future, should be expanded so that Shenyang becomes a worthy center of environmental protection industry. In order to do this, similar companies to Special Environment Protection Equipment Co., Ltd. need to be set up not only in the area of sanitary sewage treatment but also waste gas treatment, noise countermeasures and incinerators, etc.

- b) Improved competitiveness

Shenyang will not be able to achieve competitiveness even as an experimentation site for water treatment plant development if the only company located there is Special Environment Protection Equipment Co., Ltd. Future development requires that numerous companies at the same level in terms of technology and cost compete with each other in the city according to market principles. It is hard to imagine that numerous foreign affiliates in competition with each other will all seek to conclude tie-ups for the same technology with one common partner, i.e. Special Environment Protection Equipment Co., Ltd. To give an example, rather than three foreign affiliates A, B and C possessing the same technology all concluding tie-ups with the same Chinese enterprise D, it is more desirable for three tie-ups to be formed between foreign company A and Chinese company D, foreign company B and Chinese company E and foreign company C and Chinese company F, and for each group to compete according to market principles.

- 3) Technological development and support of SMEs with a view to realizing environmental protection policies

This is also linked to preparation of the consistent policy legislation that has already been proposed by the Environmental Protection Industry Office, but it is also necessary for authorities to become interested and motivated about taking steps within the existing policy framework.

Actual cases experienced during the Study are described below.

'White pollution prevention' is a current theme of environmental pollution prevention. Shenyang City Government on May 15, 2000 issued a bold notification even by world standards stating, "Use of non-degradable plastic throwaway food utensils and ultra-thin plastic bags shall be prohibited." This was enacted on July 1, 2000. However, because no suitable replacement for non-degradable plastic has so far appeared on the market, this notification is not adhered to.

A venture company in Shenyang forecast this situation four years ago and worked on researching and developing biodegradable plastic made from starch obtained from sweet corn, etc. and it succeeded in developing technology which earned praise from a leading German maker and eventually led to conclusion of a cross-license agreement with this maker. This technology was also recognized by and received prestigious awards from municipal and provincial authorities, however, because no concrete support was forthcoming, the enterprise struggled to obtain funds for company establishment and it was eventually forced to consider selling off the patent it had worked so hard for.

In another case, an enterprise in Shenyang recently invested 30 million Yuan in ordering a biodegradable plastic production line from a German maker and thus boosting its production capacity by 10 times. It has been reported in industrial literature that the Science and Technology Working Group of the Chinese Academy of Environmental Sciences, placing confidence in the capability and future potential of this enterprise, decided to establish China's first scientific research base for new environmental materials in a joint venture with this enterprise. To take no steps would otherwise mean the disappearance of this locally developed technology that was recognized by the city and provincial authorities and was anticipated would become a standard technology in future. Also, implementation of the government notification on prevention of white pollution would fall further behind schedule.

Furthermore, not only would prevention of white pollution be prevented, but other anticipated effects such as the effective utilization of excess farm products, conservation of oil resources (raw materials of non-degradable plastic), and improvement of the economic level of rural villages, etc. would also be greatly delayed.

This means that part of the work conducted by a company diagnostician in Japan in supporting establishment of a company was actually carried out in China. The big difference with Japan is that support measures for SMEs are not in place in China. Moreover, since the government was bold enough to issue such a forward looking notification as this, it must at the same time make the necessary efforts to ensure that this has a real effect and does not end up being a mere facade.

Therefore, with respect to the basic national policy of environmental protection, in addition to adopting preferential measures for large leading companies, the government should not only provide awards but also establish a system and fund for supporting SMEs that have effective advanced technology and are willing to put government policies into effect but are faced with funding difficulties.

If SMEs can make astute use of recent information technology and have the willingness to try new ideas, they should be able to capitalize on their versatility and find new areas of technological development on a par with major enterprises.

CHAPTER 4

CURRENT STATES AND PROBLEMS IN SMEs

CHAPTER 4

CURRENT STATES AND PROBLEMS IN SMEs

4.1 Current State of SMEs

4.1.1 Definition of SMEs

First of all, the Study Team declares that any official definition of SMEs is not completed in China yet. However, as the central government and the central bank have set forth so called SMEs promotion policy measures recently, SMEs become a popular ward today in the country. And the local administrations or the commercial banks which are in charge of execution of those SMEs promotion measures often devise their own definition for convenience' sake. Therefore, as a matter of fact various unofficial definitions of SMEs are availed in China.

Secondary, manufacturing enterprises had been classified by the scale of their production capacity in the past age, and the government legislated new classification which classify the manufacturing enterprises by their annual turn over and total asset in 1999 (refer Table 4-1-1). Name of the categories such as middle-sized enterprise and small-sized enterprise may express SMEs in the wording. The commercial banks may often device their own definition of SMEs as same category of enterprise as middle-sized enterprise and smaller one of the above classification.

Thirdly, the famous “Control Large, Free Small” policy indicates that the State-owned small-sized enterprises should be treated as free entities from the governmental supports. So that it can be said that SMEs may be same as the small-sized enterprises of the classification in the context.

Table 4-1-1 Classification Criteria of Enterprises by Scale

	Annual Turn Over and Total Asset
Super large-scale enterprises	More than RMB 5 billion Yuan to each criterion
Large-scale enterprises	More than RMB 500 million Yuan to each criterion
Medium-sized enterprises	More than RMB 50 million Yuan to each criterion
Small-sized enterprises	Less than RMB 500 million Yuan to each criterion

Source: The Japan-China Economic Association by compilation of the “Economic Information Report April 19, 1999”

The definition of SMEs in Japan is explained briefly for the reference hereunder.

The definition of SMEs was established to define the eligible enterprises, which could be supported by the public SMEs support, measures.

The existing classification is shown in Table 4-1-2, though the criteria to identify the eligibilities are set to either the amount of paid up capital or the number of employees. The division of manufacturing industry of Table 4-1-2 is comparable to those of China mentioned above. However, as the Japanese criteria do not apply the criterion of annual turn over, some enterprises of which annual turn over far exceeds RMB 50 million Yuan may be included.

Table 4-1-2 Criteria of SMEs in Japan

	Number of employees	Paid up capital
Manufacturing Industry	300 or less	300 million yen or less
Wholesale Trade	100 or less	100 million yen or less
Retail Trade	50 or less	50 million yen or less
Service Industry	100 or less	50 million Yen or less

Source: The JICA Study Team (by Compilation of various materials related to SMEs)

4.1.2 Production, Employment and Tax Payment by SMEs

In regard to the definition of SMEs, those small enterprises with an annual turnover which is higher than the threshold (RMB 5 million) are called SMEs in this chapter. The number of enterprises matching this definition is 999, of which 36% are in the red.

While the available statistics provide the business indices for the total of 999 enterprises, the Study Team has added simple average values in Table 4-1-3 to illustrate the average size of these enterprises.

In 1999, SMEs in Shenyang accounted for 39% (RMB 23.5 billion) of the total production value of all manufacturing enterprises above the threshold.

Apart from their original purposes of producing products and value, manufacturing enterprises contribute to society and the state in terms of employment and tax payment. SMEs employed more than 260,000 people and paid slightly less than RMB 5.8 billion in tax, accounting for 43% of the total number of employees and 37% of the tax payment of all

enterprises above the threshold, including large enterprises. While these contributions made by SMEs are significant, their contribution to employment is particularly noticeable.

Table 4-1-3 Business Activities of Small Enterprises Above the Threshold (1991)

(Unit: RMB million)

Item	Total	Average
Number of Enterprises	999	1
Number of Loss-Making Enterprises	359	0
< Production Activities >		
Production Value	23,479.33	23.60
Sales Value	22,654.76	22.68
Intermediate Input	17,076.21	17.09
Amount of Increase	7,265.25	7.27
< Balance Sheet >		
Total Assets	51,268.79	51.32
Current Assets	24,980.77	25.01
Trade Receivable	5,669.50	5.68
Inventory	3,692.32	3.70
Long-Term Investment	1,694.62	1.70
Fixed Assets	20,252.49	20.37
Acquisition of Fixed Assets	24,442.19	24.47
Of Which is Production Equipment	18,612.71	18.63
Aggregate Depreciation	6,671.47	6.68
Depreciation for the Year	871.16	0.87
Book Price of Fixed Assets	17,770.72	17.79
Liabilities	33,347.07	33.38
Current Liabilities	26,039.28	26.07
Long-Term Liabilities	6,469.52	6.48
Own Capital (Net Worth)	17,921.72	17.94
Capital	15,575.20	15.59
State Enterprises	6,585.87	6.59
Collective Enterprises	1,136.55	1.14
Incorporated Enterprises	2,214.12	2.22
Private Enterprises	1,071.51	1.07
Hong Kong, Macao and Taiwanese Subsidiaries	1,722.26	1.72
Foreign Subsidiaries	2,844.88	2.85
< Profit and Loss Statement >		
Sales Income	21,202.31	21.22
Product Cost	17,425.23	17.44
Sales Cost	1,100.47	1.10
Sales Tax and Others	186.19	0.19
Sales Profit	2,252.42	2.25
Other Operating Income	168.24	0.17
Management Cost	1,921.89	1.92
Tax	60.67	0.06
Insurance Premium for Assets	20.47	0.02
Unemployment Insurance Premium	199.93	0.20
Accounting Cost	513.87	0.51
Interest Paid	415.58	0.42
Operating Profit	-4.95	0.00
Gross Profit	272.23	0.27
Income Tax	206.44	0.21
Loss for Those Enterprises in the Red	1,011.87	1.00
Gross Tax on Profit	1,320.56	1.32
Welfare Cost	170.55	0.17
Value Added Tax	862.12	0.86
Purchase Tax	2,219.82	2.22
Business Tax	2,703.71	2.71
< Employment >		
Number of Employees	2,626.65	2.63

4.1.3 Types of SME Ownership

In regard to the types of SME ownership based on the paid capital, state and collective enterprises account for some 50% and Hong Kong, Macao, Taiwanese and foreign subsidiaries account for 29%. These two types of enterprises, therefore, account for almost 80% of the paid capital. The share of the private sector is still low. However, given the tendency of large paid capital among state and collective enterprises, the share of the private sector should be slightly higher in terms of the number of enterprises.

Table 4-1-4 Breakdown of Paid Capital by Type of Ownership

Paid Capital Total (RMB billion)	155,752.0	100.0%
State Enterprises	65,858.7	42.3%
Collective Enterprises	11,365.5	7.3%
Incorporated Enterprises	22,141.2	14.2%
Private Enterprises	10,715.1	6.9%
Hong Kong, Macao and Taiwanese Subsidiaries	17,222.6	11.1%
Foreign Subsidiaries	28,448.8	18.3%

Source: Compiled based on data in Shenyang Yearbook 2000

4.1.4 Profitability of SMEs

The totalized figures of those shown on the profit and loss statements of the 999 enterprises are shown in Table 4-1-5.

Translated into Japanese accounting from the original Chinese accounting, the rough sales profit ratio is slightly less than 18%. The operating profit ratio to sales, which is achieved by deducting the sales cost and the management cost from the rough sales profit, is 4.5%. With a further reduction of the financial cost, the current profit shows a virtually break-even situation. The pre-tax profit ratio to sales is 1.3% and the profit ratio after tax to sales is 0.3%. As the profit ratio to total assets is 0.124%, the level of profitability is low.

Table 4-1-5 Totalized Profit and Loss Statements

Item	Amount (RMB million)	Ratio (%)
Sales Income	21,202.31	100.0
Product Cost	17,425.23	82.2
Sales Cost	1,100.47	5.2
Sales Tax and Others	186.19	0.9
Sales Profit	2,252.42	10.6
Other Operating Income	168.24	0.8
Management Cost	1,921.89	9.1
Tax	60.67	0.3
Insurance Premium for Assets	20.47	0.1
Unemployment Insurance Premium	199.93	0.9
Accounting Cost	513.87	2.4
Interest Paid	415.58	2.0
Operating Profit	-4.95	0.0
Gross Profit	272.23	1.3
Income Tax	206.44	1.0
Loss for Those Enterprises in the Red	1,001.87	4.7
Gross Tax on Profit	1,320.56	6.2
Welfare Cost	170.55	0.8
Value Added Tax	862.12	4.1
Purchase Tax	2,219.82	10.5
Business Tax	2,703.71	12.8

Source: Compiled based on data in Shenyang Yearbook 2000

4.1.5 Financial State of SMEs

The most basic financial indices for SMEs are shown in Table 4-1-6.

Table 4-1-6 Main Financial Indices

(Unit: RMB million)

Total Capital	51,268.79
Current Assets	24,980.77
Current Liabilities	26,039.28
Liabilities	51,268.79
Net Worth (Own Capital)	17,921.72
Paid Capital	15,575.20
Ratio of Net Worth to Total Capital (%)	35
Ratio of Liabilities (%)	65

Source: Compiled based on data in Shenyang Yearbook 2000

- (1) The ratio of net worth to total capital of 35% is relatively high.
- (2) The paid capital accounts for a large proportion of the net worth, i.e. 85%, indicating a low level of accumulated profit.
- (3) The ratio of liabilities is 65%. At present, the lending criterion for a bank loan in terms of the ratio of liabilities is said to be up to 70% and, therefore, this level of the ratio of liabilities does not provide much room for loan approval.
- (4) The higher level of current liabilities than current assets suggests that part of the fixed assets purchase is financed by short-term funds.
- (5) The interest ratio to liabilities is 1.25%, suggesting a fairly high level of use of no interest loans, i.e. credit between enterprises.

Given the above financial situation coupled with the low profitability described earlier, it appears safe to infer that the fund raising capacity of SMEs is already fairly weak. This situation indicates the need for SMEs to considerably improve the efficiency of both fund management and assets management.

The most problematic point for SMEs in Shenyang appears to be the fact that they ignore the interests of shareholders. Unless this situation is rectified, the targets established for business operation will not be those which will achieve true business development, possibly leading to a contradictory situation where the wealth of enterprises is eroded despite efforts to improve the business management. SMEs in Shenyang must make efforts to adopt techniques which combine business management and financial reform of which the effectiveness has been proven in the market economy of advanced industrialized countries in addition to other useful measures.

4.2 Impediments to SME Development

4.2.1 Questionnaire Survey Results

- (1) Questionnaire surveys and interview surveys on business management issues faced by SMEs in Shenyang were carried out with respect to 100 SMEs, and responses were received from 91 of these.

Type of ownership and sector of targeted SMEs:

State enterprises: 22, Collective enterprises: 24, Private enterprises: 36, One-man businesses: 0, Foreign affiliated enterprises: 9, Machine industry: 19, Environmental protection: 7, Electronics and information: 10, Automobile parts: 14, Other: 41

Questions:

If you were to classify 40 business management items into the following three areas, please select up to eight items you consider to be important in each.

- (A) Currently faced item with which you are having difficulty
- (B) Item in which you are currently interested
- (C) Item you consider will become a new issue in the near future

(2) The results obtained by the Study Team in analyzing the results (see Figure 4-2-1, Figure 4-2-2) are as follows. Incidentally, since the Study Team visited each of these companies and surveyed them from a variety of angles, additional comments are given based on those observations. The 40 items under consideration were arranged under the six headings of: (1) Business management in general, (2) Information, (3) Marketing, (4) Human resources, (5) Production and technology, and (6) Fund raising.

1) Business management in general: (A) 18 responses, (B) 53 responses, (C) 31 responses, total 102 responses

Very few enterprises consider there to be a problem with business management in general. This is linked to the fact that SMEs largely place the emphasis of their business objectives on achievement of production targets designated by their corporate control divisions or parent companies. In reality, very few companies actually compile operating plans. Even accepting that top management is not accustomed to paying attention to corporate business management in general, this is still a major problem.

2) Information: (A) 16 responses, (B) 75 responses, (C) 18 responses, total 109 responses

Interest in information is relatively low but a lot of attention is focused on obtaining market information. Meanwhile, no companies responded that they are dealing with information unification and information sharing at the current point in time. It can be said that enterprises are behind in their approach to information control and IT.

- 3) Marketing: (A) 33 responses, (B) 79 responses, (C) 50 responses, total 162 responses

There is a fairly high level of interest in marketing. Interest in areas such as ‘prices demanded by customers’, ‘sales networks’ and ‘after sales service’ is high. A lot of enterprises responded that ‘securing of export markets’ would become an issue in the future. On the other hand, distribution networks and delivery deadlines are not a problem. This reflects the fact that most SMEs conduct price competition in nearby markets such as the city or province and that they have low plant operating rates.

- 4) Human resources and personnel management: (A) 48 responses, (B) 110 responses, (C) 60 responses, total 218 responses

Very many enterprises experience problems with human resources. Most responses focused on ‘human resources’ and ‘capacity development’ and this indicates that enterprises are troubled by a lack of capable human resources. Capable here refers to the possession of thinking process, technology and know-how, etc. that are responsive to the market economy and the ability to display those qualities. In the surveyed companies, even if the top management possesses the willingness to conduct corporate reform, intermediate managers necessary for implementing reform throughout the whole company have not been nurtured. However, there is no evidence of SMEs taking a positive approach to the capacity development of their employees.

- 5) Production and technology: (A) 76 responses, (B) 196 responses, (C) 43 responses, total 315 responses

This is the item to which most companies responded. It can be seen that SMEs are confronted with problems in the key manufacturing areas of quality, cost, new product development and production technology. Moreover, because basic data for elucidating the causes of these problems are not accumulated, almost all companies are unable to compile countermeasures. For example, many SMEs struggle with cost management, however, there are basic deficiencies in that individual cost control is not carried out and work standards are not accurate, etc. Moreover, since there are no human resources in enterprises capable of providing guidance, the situation is critical.

- 6) Fund raising: (A) 50 responses, (B) 14 responses, (C) 2 responses, total 66 responses

Two out of three of the target companies have problems with fund raising. More than half of all targeted enterprises (50 enterprises) consider this to be a ‘Currently

faced item with which you are having difficulty' and the situation is serious. 68 (75%) of the targeted enterprises have loan liabilities, i.e. they were able to borrow loans previously but now have diminished fund raising capacity. Poor business showing is one of the reasons for this situation, however, in addition, companies where assets and financial controls are inadequate (the scope of assets ownership is not clear but there are some companies where conditions are opaque and others where accounts are doctored) can also be seen. The fact that some companies have lost confidence as a result of paying little attention to credit also cannot be overlooked.

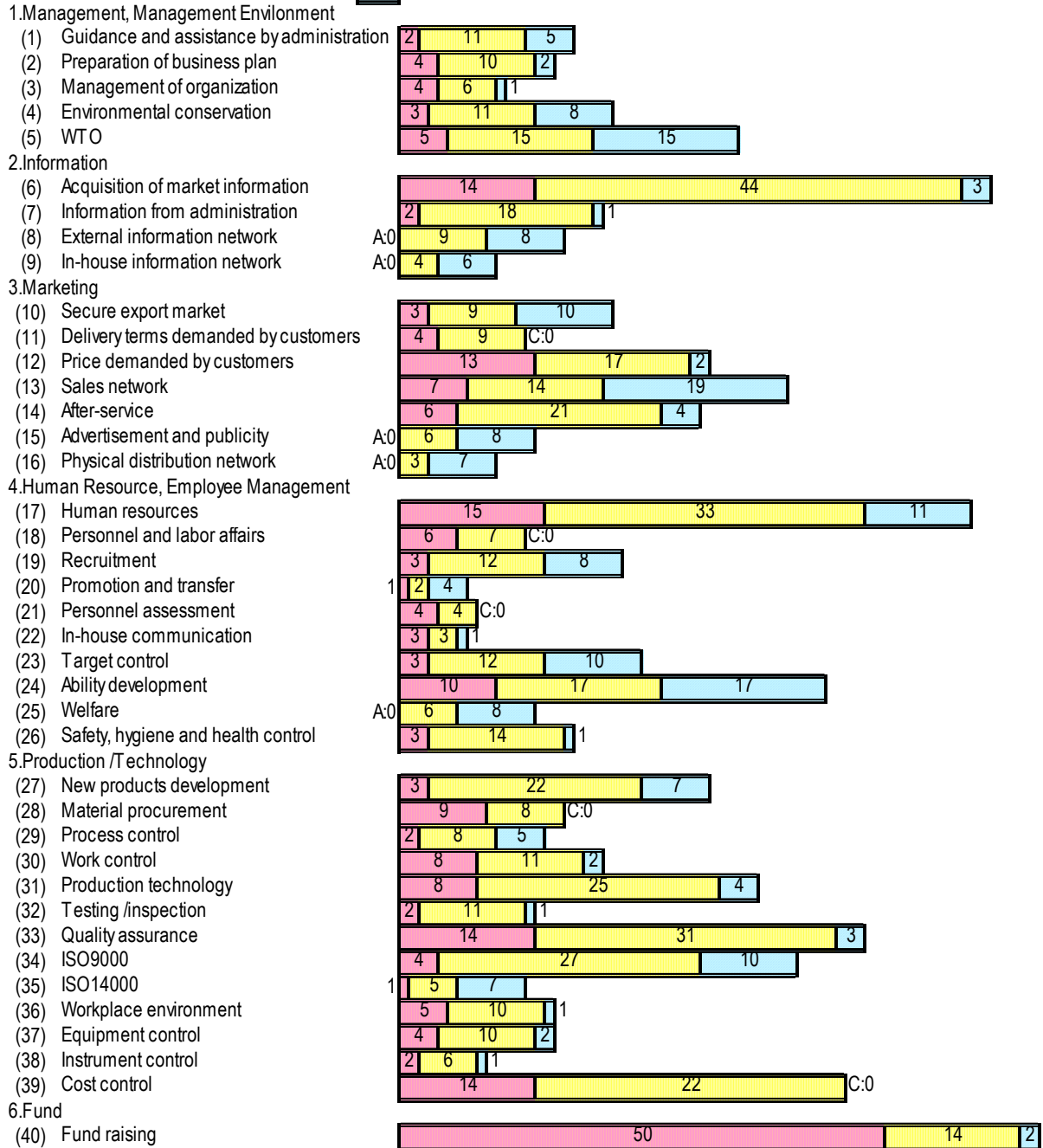
[Summary]

Enterprises are said to consist of people, things and money, however, judging from the current state of business resources in the surveyed enterprises, conditions are critical in all these areas.

When management-related issues are classified into the following three categories, what are the most important issues in each category?
(Please select eight issues in each category.)

(Note) Figure in the graph shows the number of company answered. Total : 91 companies

A : Issue currently faced and difficult to deal with
B : Issue currently interested in
C : Issue which is expected to become a challenging task in the future



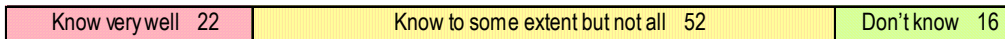
☆Classification of 91 companies answered

Type of Ownership	State 22	Collective 24	Private 36	Personal 0	Foreign 9
Type of Business	General Machinery 19	Electronics/ Information 10	Automobile Parts 14	Environmental Protection 7	Others 41

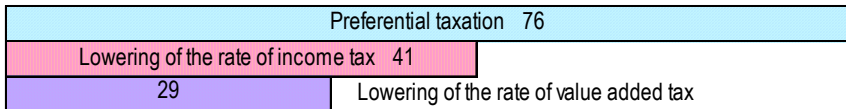
Fig. 4-2-1 Result of Questionnaire to SMEs (General)

1. SME Promotion Policies

- 1) Laws and systems designed to promote SMEs are currently being developed, including the establishment of a Department of SME. Do you know anything about such development?



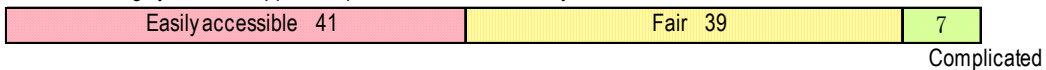
- 2) Which of the following measures do you think should be given priority for urgent implementation?



- 3) Is deregulation necessary?

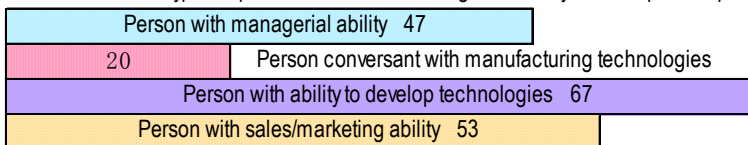


- 4) Are the existing systems to support the promotion of SMEs easily accessible?

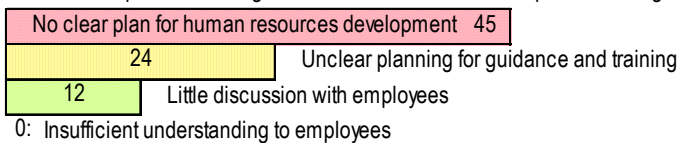


2. Organization and Personnel (Human Resources)

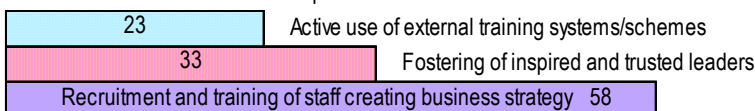
- 1) Please select two types of persons from the following list which your enterprise hopes to recruit.



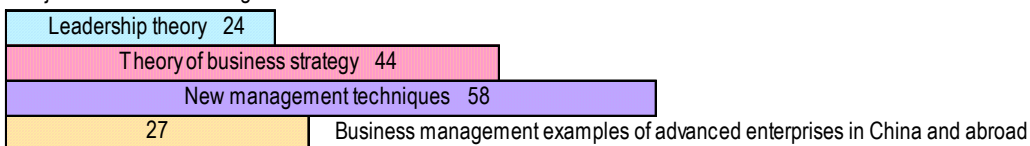
- 2) What are the problems in regard to human resources development and organization?



- 3) Vision for human resources development



- 4) Subjects for further learning as a SME owner



- 5) Requests for public systems and policies

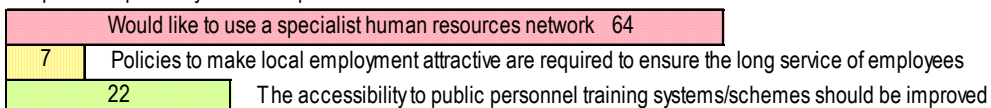
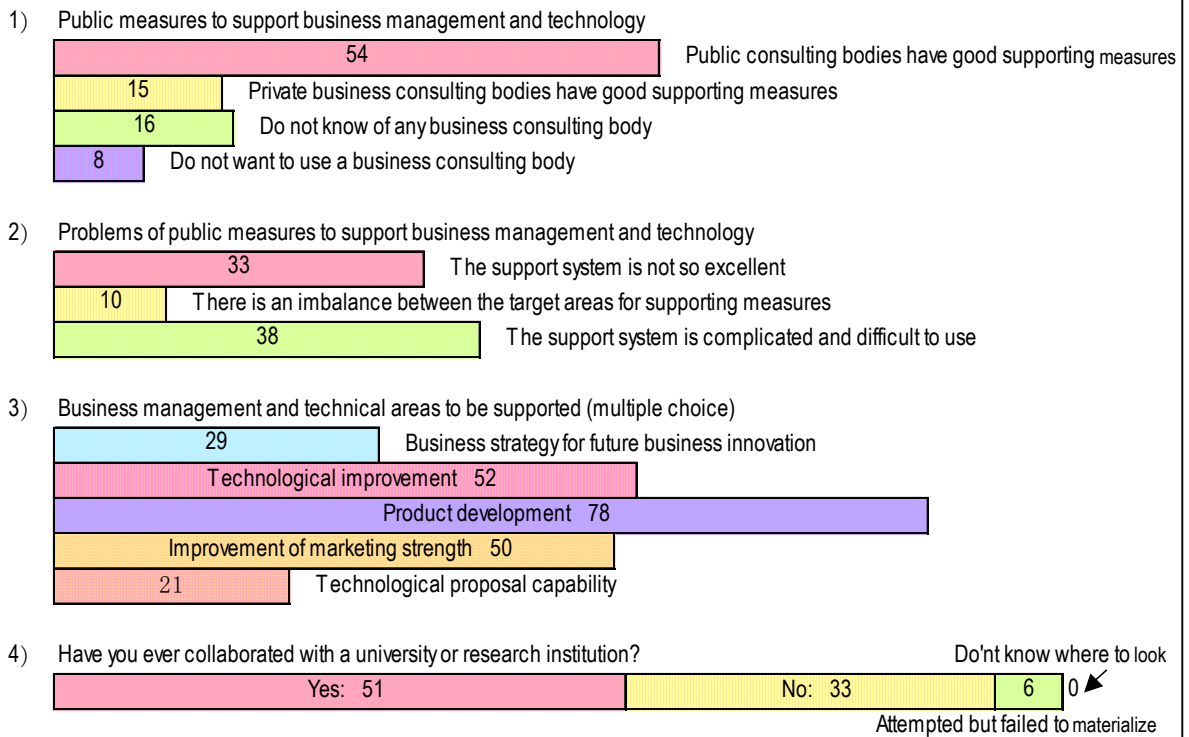


Fig. 4-2-2 (1)

3. Technology and Business Management



4. Environmental Issues

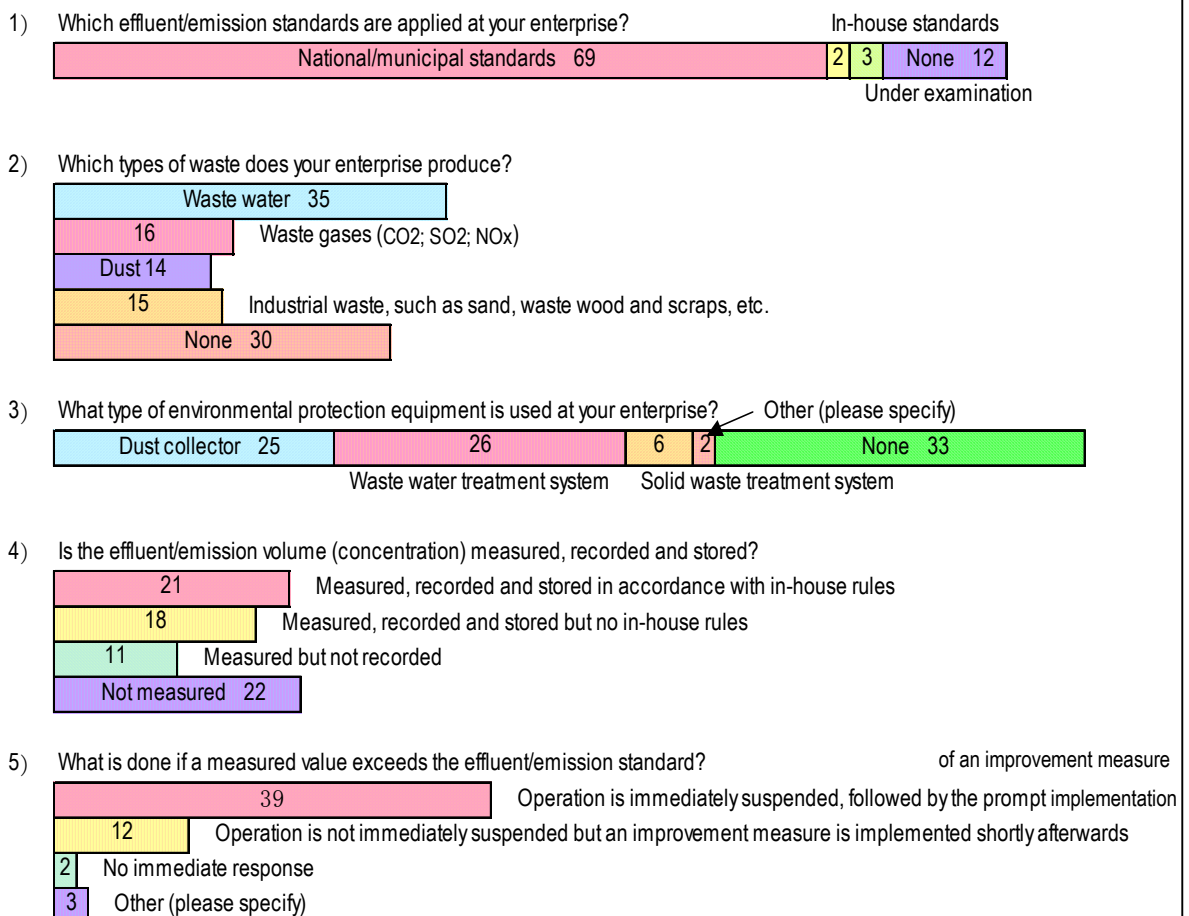
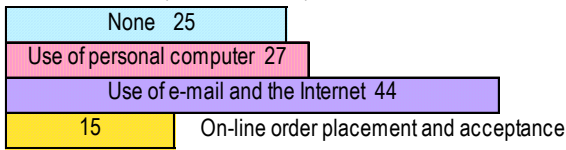


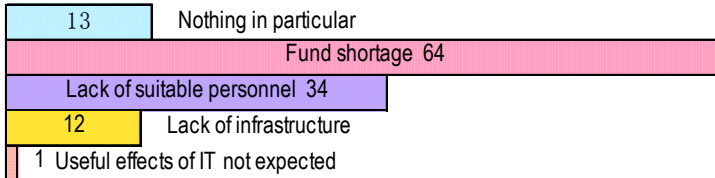
Fig. 4-2-2 (2)

5. Information Network

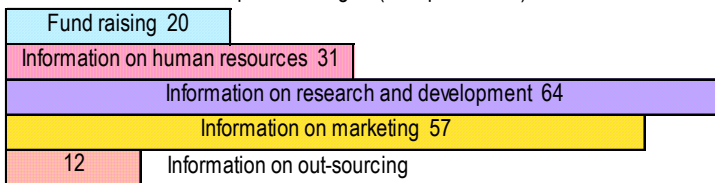
1) Current use of IT (multiple choice)



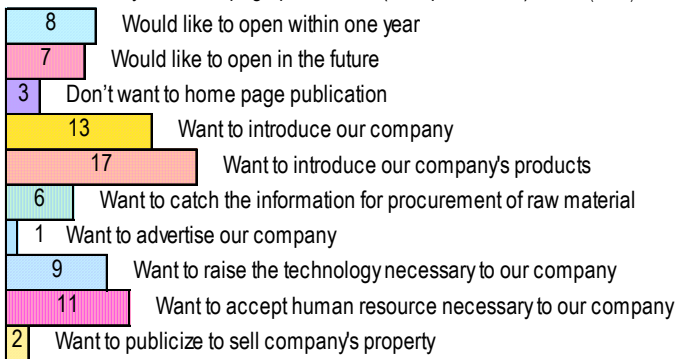
2) Factors impeding the use of IT (multiple choice)



3) What is the most useful aspect of using IT (multiple choice)

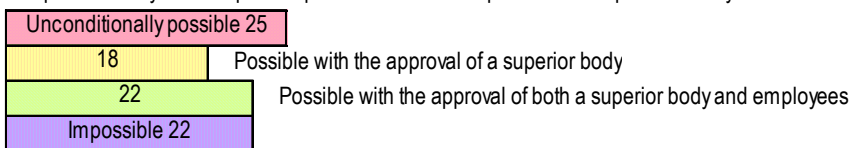


4) Questions on your home page publication (multiple choice) (Note) Only this answer contains total 30 companies



6. Investment Funds

1) Is it possible for your enterprise to purchase other enterprises or to be purchased by others?



2) Have investment funds ever been provided?

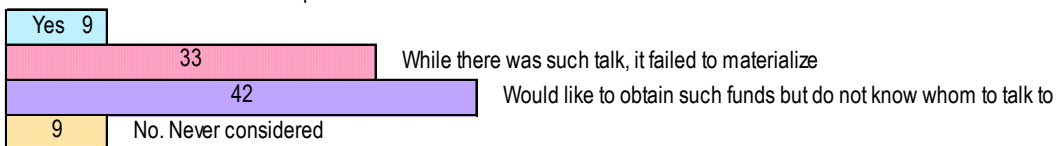
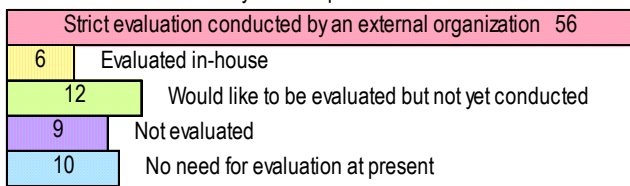
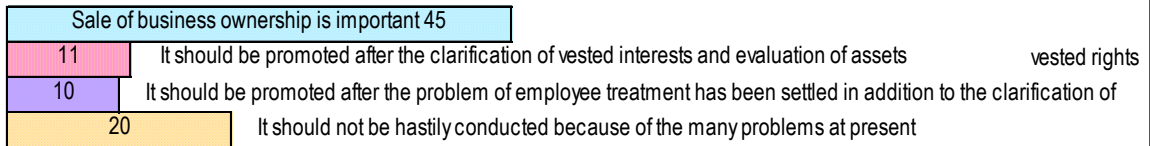


Fig. 4-2-2 (3)

3) Evaluation of the assets of your enterprise

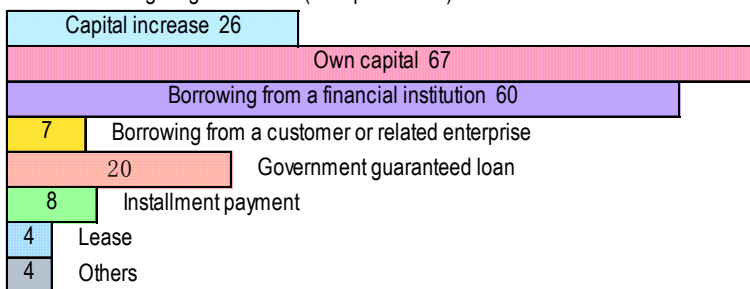


4) Sale of business ownership

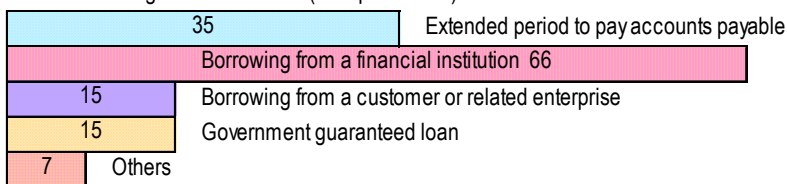


7. SME Finance

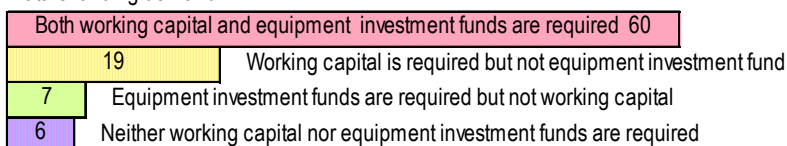
1) Means of raising long-term funds (multiple choice)



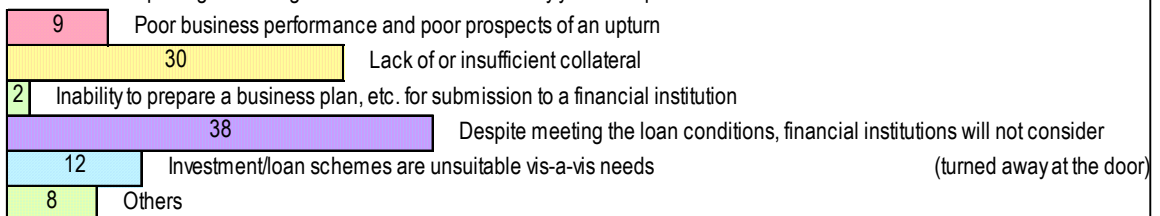
2) Means of raising short-term funds (multiple choice)



3) Future funding demand



4) Main factors impeding borrowing from a financial institution by your enterprise



5) Financial strategy of your enterprise for the next several years (multiple choice)

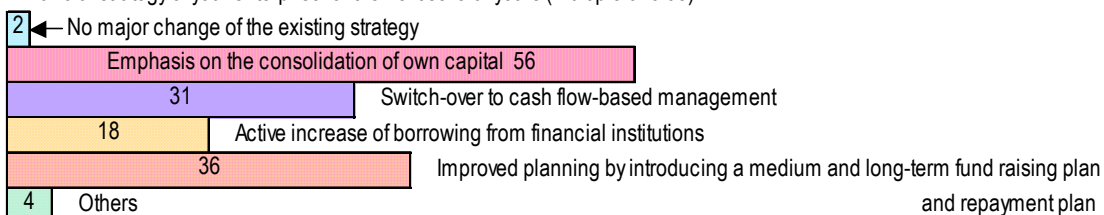
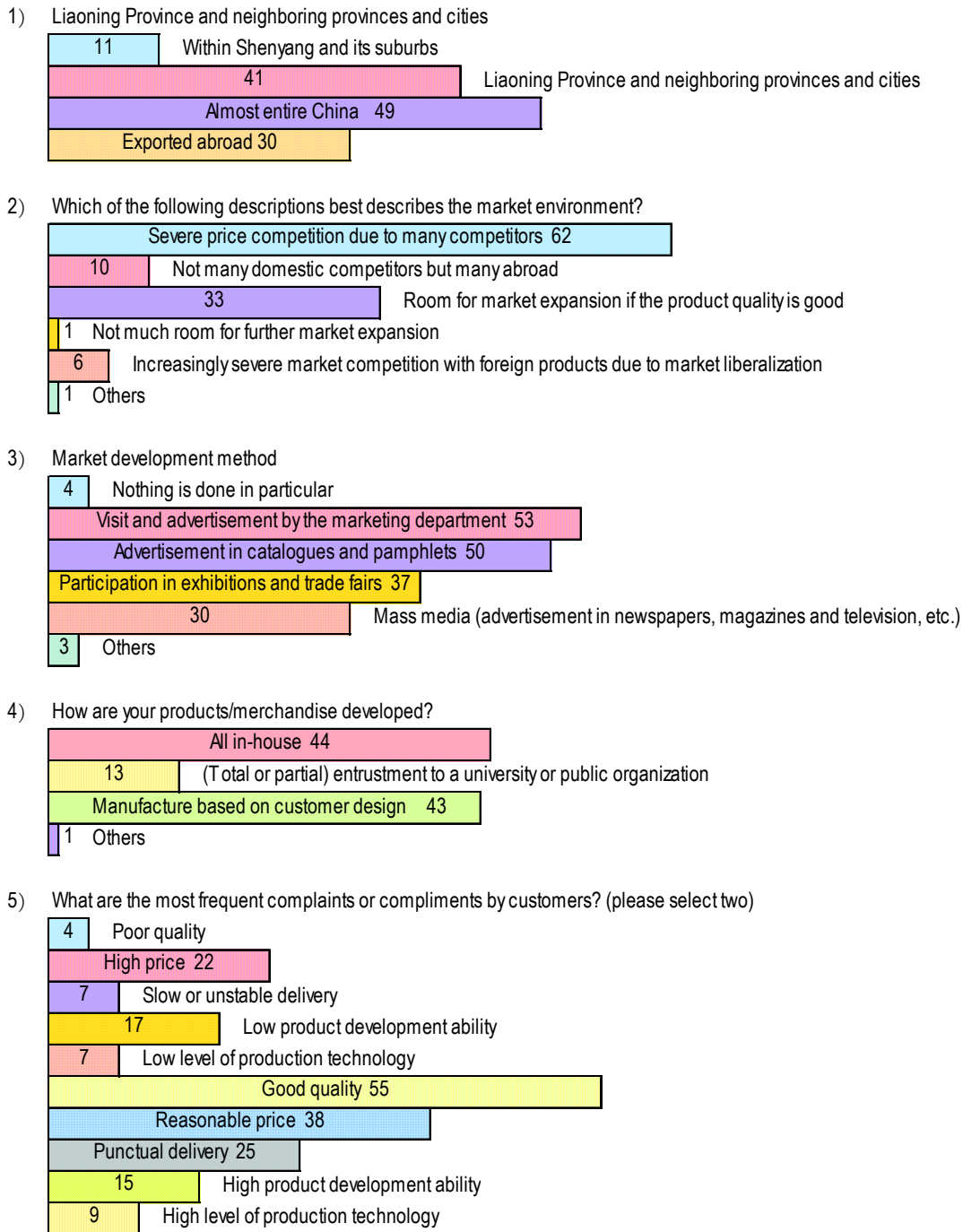


Fig. 4-2-2 (4)

8. Marketing



☆Classification of 91 companies answered

Type of Ownership	State 22	Collective 24	Private 36	Personal 0	Foreign 9
Type of Business	General Machinery 19	Electronics/ Information 10	Automobile Parts 14	Environmental Protection 7	Others 41

(Note) Figure in the graph shows the number of company answered. Total : 91 companies

Fig. 4-2-2 (5)

Fig. 4-2-2 Result of Questionnaire to SMEs (Each Subject)

4.3 General Analysis

The Project started with survey and research of impediments to the development of SMEs, and most of the visited companies too have major impediments.

At this point, SWOT analysis was carried out in a joint effort by the internal diagnosis study group and the policy study group, however, it was not possible to fully achieve the objectives of SWOT analysis due to the preponderance of impediments.

However, since impediments to development are insufficient in order to research SME promotion measures, it became necessary to also investigate key success factors and accumulation of internal resources (core competence). In the course of these investigations, it became clear that not only are many enterprises in Shenyang complacent about their status in the midst of international competition, but they do not make sufficient effort to investigate their own core competence.

Entering 2001, the municipal government vigorously commenced projects and activities designed to strengthen supports for the industrialization of science and technology in SMEs and to promote joint ventures and mergers between foreign capital and leading SMEs which have good prospects for future development in the automobile parts and IT sectors.

The Study Team asked the municipal government, Economy and Technology Development Zone, and Science and Technology Commission Productivity Promotion Center to cite items concerning strengths and opportunities in Shenyang. Valuable information was obtained in exchange of opinions with these organizations. The major problems and issues in enterprises as obtained in the company diagnoses (first half of the Study) and pilot project (second half) are as follows.

(1) Strengths

- 1) Shenyang, is one of the top zones in China for possessing basic industries. Thinking and activities in the area of making things are strong. For example, many of the research departments of Shenyang University were found to manufacture and sell the products of their research (special pumps, welders).
- 2) There are 22 colleges and universities throughout the city and more than 132 research organs at the municipal level or above. There are 580,000 researchers, which means that the city is blessed with human resources, and there are also 18 councilors. Already, groups of university researchers have set up high-tech

enterprises such as Heguan collective group, Tongyu collective group and Northeastern Alpine Co., etc. and these have become the largest enterprises in Shenyang. Northeastern Alpine has grown into the top software company in China, and this indicates that the high-tech industry in Shenyang has high potential for development.

- 3) 19 out of the top 500 companies in the world have invested in Shenyang. Taking the automobile sector as an example, a multinational automobile maker has invested here and plans on developing a car base in Liaoning Province.
- 4) Diffusion of the Internet is advancing and there are numerous information networks.

(2) Weaknesses

- 1) Even privatized enterprises still retain former management setups inherited from the age of state ownership.
- 2) Business management weaknesses lie in marketing and product development capacity. Comparison with other companies is not carried out and enterprises are unaware of their low levels.
- 3) Site improvements are not carried out.
- 4) Enterprises do not educate their own human resources (because mobility of human resources is so high).
- 5) Most enterprises have no channel linking them with overseas companies.

Note: Of the above weaknesses, 1), 2) and 3) arise from the fact that enterprise ownership is in a period of flux, and the others are problems common to SMEs in general.

The above findings are compiled into the SWOT¹ analysis sheet shown in Table 4-3-1.

¹ SWOT is the abbreviation for Strengths, Weaknesses, Opportunities and Threats and is a technique for assessing competitiveness. Applicable elements from market surveys are entered onto a diagram consisting of four parts.

Table 4-3-1 SWOT Analysis of SMEs in Shenyang

<p>Strength</p> <ul style="list-style-type: none"> - Manufacturing supporting industries - Integrated Advanced Science and Technology (4th rank in China) - Excellent Human resources, High education and abundant research output - Land transportation hub - Success in some restructuring of excellent state-owned large scale enterprises - Basic technology of Mechatronics - Plant and equipment industries - Well developed IT industries - Well developed internet utilization - Some success stories in Venture Businesses - Well developed industrial developing zones 	<p>Weakness</p> <ul style="list-style-type: none"> - Underdevelopment in restructuring of large scale and/or states-owned enterprises - Underdeveloped technology reform in traditional industries - Corporate culture inherited from states-owned enterprise - Corporate finance - Fiscal deficit - Insufficient education of enterprise executives - Obsolete product design (one generation in behind) - Product quality and productivity - International business environment - PR and advertisement of local industries
<p>Opportunity</p> <ul style="list-style-type: none"> - Industrial restoration through FDI - Development of excellent SMEs - Growth of automotive production base - Involvement in Great West development - Development of three North East China market - Growth of Industrial Development Zones - Success in technical reform of Tiexu industrial zone - Industrial implementation of incubation 	<p>Threat</p> <ul style="list-style-type: none"> - Competitiveness of some SMEs after China's join in WTO - High burden of atomization of intensive investment

During the 1980s, Shenyang prospered as one of the top two industrial cities in China alongside Shanghai, and it made a major contribution to Chinese industry. Following this period, however, Shenyang was slow to catch up with the transition to the market economy and it currently lags behind other advanced districts in China.

However, since last year Shenyang has been striving for industrial revival through promotion of SMEs, and the results of these efforts can be seen in Fig. 4-3-1. In spite of the fact that the world economy is in recession and economic growth was also slow in China in 1999, Shenyang witnessed double-digit growth in its industrial production GDP.

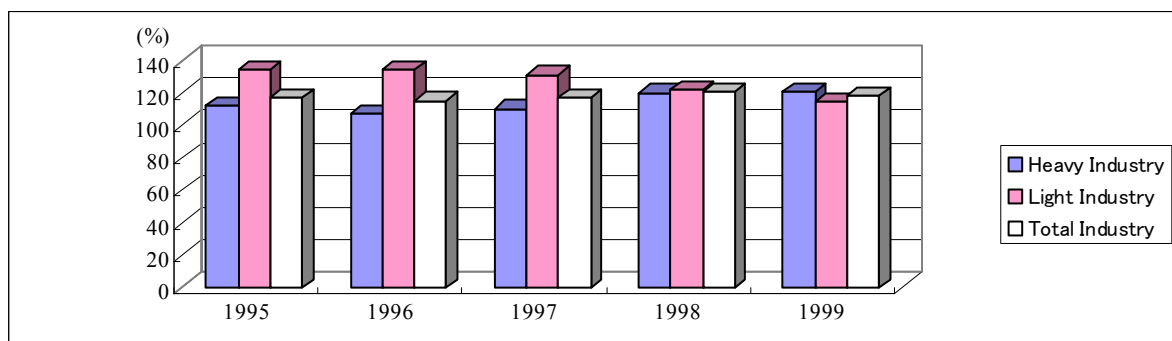


Fig. 4-3-1 Industrial GDP Growth

CHAPTER 5

SME SUPPORT ORGANIZATIONS AND POLICIES OF SHENYANG MUNICIPAL GOVERNMENT

CHAPTER 5

SME SUPPORT ORGANIZATIONS AND POLICIES OF SHENYANG MUNICIPAL GOVERNMENT

5.1 Start of SME Support in Shenyang

The formulation of policies and formation of support system for SME (small and medium sized enterprises) in Shenyang began to be active finally around the middle of the year 2000. The process is shown below.

5.1.1 Process

- Early 1999 : The SME Office was established in the SMETC. (The Shenyang Municipal Economic and Trade Commission)
- Sept. 2000 : The Shenyang SME Credit Guarantee Fund was established.
- Oct. 2000 : The study team started the field survey.
- Nov. 2000 : The information network of SEMTC was opened and it became the base of the information network of the study team for SME.
- Dec. 2000 : SMEBAC (Shenyang SME Business Advisory Center) was established.
- March 2001 : The business instructions related to the Shenyang Industries Technology Innovation Service Center were finally announced. (supporting the technology innovation of SME)
- Aug. 2001 : Information network service for SME was opened.

The following supporting organizations are to be set up in late 2001 and the implementation of this plan is now in progress ;

Functional reinforcement of SME Office by its promotion to SME Bureau.

Establishment of SME Business Support Centers and Credit Guarantee Fund on ward level.

Arrangement for industrial estate for SME. (already in operation in Datong Ward)

Arrangement for incubation center of each study organization.

5.1.2 Direction of Future Development

- (1) Public support is now proceeding in a manner that it is conducted by semi-official organizations such as public service corporations.

- (2) The duty of SME control is being transferred from the municipal government to ward governments.
- (3) SME support is to be fortified by industrial estates and development wards.
- (4) There are some movements to support SME through mutual assistance activities of private groups, manufacturer's unions, etc.
- (5) Encouragement of the activities of private consulting companies.

The above-mentioned activities are now being studied and some of them are carried into effect.

5.2 SME Support Organizations

The current SME support organizations in Shenyang are shown in Fig. 5-2-1.

(1) Governmental Organization

In Shenyang Municipal Government, all enterprises are controlled by SMETC (Shenyang Municipal Economic and Trade Commission), but the duty of SME control in particular, has begun to be transferred to Economic and Trade Commission in wards with the development of privatization. Besides the Commission, the Municipal Government also has control organizations for each ownership form and function of the enterprises.

Township-Village Enterprises Management Office

Control according to the ownership form of the enterprises

Collective Enterprise Office

Control according to the ownership form of the enterprises

Foreign Enterprises Control Bureau

Control according to the ownership form of the enterprises

Private Sector Economy Development Promotion Commission

Functions to promote privatization

Science and Technology Commission

Support to the enterprises of the science and technology type

Note : The names such as "Commission", "Bureau" and "General Office" do not represent the hierarchic rank of administrative functions.

Overlapping occurs among the above-mentioned organizations in controlling enterprises in accordance with their ownership forms and functions respectively. This fact is complicating the administrative control and is also pointed out as the cause of troubles by enterprises.

The development ward in Shenyang is under control of the state, city or ward, having the closest relationship with enterprises and “One Stop Service”. The ward is an influential support organization with experiences of attracting overseas enterprises and abundant financial resources. Almost all colleges and research institutes there are also in incubation activities to contribute the support for SME to start their business.

The commercial banks are active in providing SME loans, although there is only one private bank at present.

While the SME Office is a station to be exclusively in charge of SME, the SME control and support are important business for other organizations as well.

(2) Public Service Groups (Business Unit)

The Shenyang Municipal SME Service Center and the Shenyang Municipal SME Credit Guarantee Fund, both of which the study team is trying to foster as SME support organizations, are related to SMETC and they are public service groups established with the help of an organization of overseas cooperation in U. K. (DFID) in order to support SME. While Information Center is related to SMETC, the Productivity Promotion Center is under the Science and Technology Commission and both of them are public service groups.

(3) Private Sector

The activity of the Federation of Industrial and Commercial Associations (FIC) is positive and among other things, information service and e-commerce using Internet are advanced. In the past, they placed priority on national enterprises so that the activities taken by FIC or economic groups were not systematic, although in these years, the importance of the role of this kind of organization is being recognized with the increase in the number of private enterprises.

Judging from the precedent that SME in Japan attained development thanks to instructions and encouragement from their upper set manufacturers, SMEs in Shenyang also need mutual support activities in private sectors rather than the Governmental sectors. However, the use of the information network on Internet will provide SME with more opportunities for their development.

As to private consultants, there are two groups: Government-related ones and large collective enterprises-related ones, and the need for them is finally growing. As mentioned above, the SME support activity is moving from governmental organizations

to public service corporations and then to private sectors, but judging from the experience of the study group in Shenyang, each of them is needed as each has a different role.

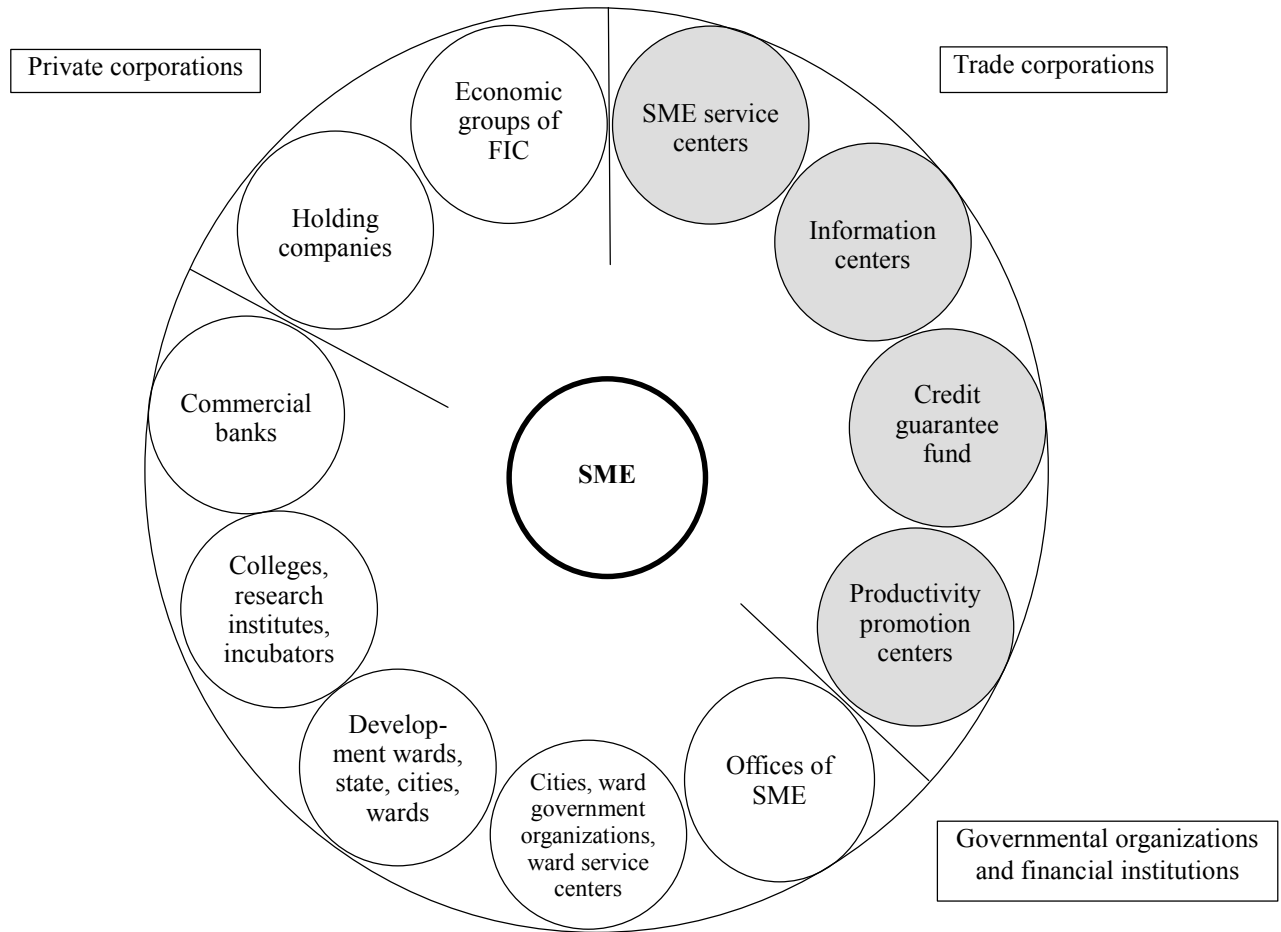


Fig. 5-2-1 SME Support Organizations System

5.2.1 Shenyang Municipal People's Government

The municipality of Shenyang consists of nine wards, one city and three districts, i.e. Heping Ward, Shenhe Ward, Huanggu Ward, Datong Ward, Tiexu Ward, Dongling Ward, Suja Ward, Yuhong Ward, Xinchengzi Ward, the district class city of Xinmin, Liaozhong province, Kangping province and Faku province.

5.2.2 Main Functions of Economic and Trade Commission

The Shenyang Municipal Economic and Trade Commission (SMETC) was established in May 1995 following the dissolution of the Shenyang Municipal Planning Commission in accordance with the Notification Regarding the Reform Plan of Party and Government Organizations of the People's Government of Liaoning Province in Shenyang by the Liaoning Provincial Committee of the Communist Party of China (Official Document No. 25 of 1995 of the Liaoning Provincial Party Committee).

The SMETC is the general organization responsible for management of the economy and coordination of the economic progress in Shenyang and has the following main functions.

- (1) Examination and formulation of an economic development strategy and formulation of medium and long-term plans
- (2) Reporting of the state of economic management to the municipal government from time to time based on analysis, monitoring and forecasting of the macroeconomy of the city while controlling economic operation in the city in an integral manner; recommendation of solutions; adjustment of economic operation in the city through collaboration with related sections using appropriate control measures and coordination to solve serious problems which occur during economic operation; extension of support for all businesses in all areas of the city; formulation, implementation and management of a thermal energy supply program for all enterprises and formulation of relevant measures; guidance on and coordination of safe production by manufacturers and business relief activities of the municipal government
- (3) Participation in the formulation and implementation of an industrial policy master plan, industrial restructuring policies and local industrial policies
- (4) Examination and enactment of comprehensive laws and regulations relating to manufacturing, transport, domestic trade, international trade and energy conservation, etc.; supervision and inspection of the state of progress of enforcing these laws and regulations
- (5) Guidance on market creation and development; solving of problems relating to market creation and management

- (6) Formulation and implementation of an enterprise reform program and solving of problems; guidance on the formulation of laws and regulations on management enterprises of state and non-state enterprises and on enterprises in general; joint formulation of regulations to supervise and manage state assets with related sections; activities to convert loss-making enterprises to profit-making enterprises; energy conservation and environmental protection; control of production and physical distribution sectors; guidance on the businesses of industrial associations and academic societies and management of foreign subsidiaries
- (7) Checking of the state of supervision of enterprises and development of an enterprises control system jointly with related sections; examination and evaluation of the annual economic progress plans of the municipal government, ward and district authorities, industrial bureaus and collective corporations; training of leading officials responsible for economic management and company executives; evaluation of business qualifications; guidance on and cooperation for the introduction of technologies from overseas
- (8) Control of technological innovation movements by enterprises; formulation, refinement, notification and implementation of investment plans for technological remodeling (including attraction of inward foreign investment and overseas loans, etc.), technology import plans, new product development and new technology extension plans, domestic manufacturing plans for important equipment and annual programs for all of these plans; guidance on and implementation of activities to encourage joint industrial and academic projects and high-tech industries
- (9) Harmonization between domestic trade and international trade; formulation of policies and measures concerning the product import/export structure jointly with related sections and inspection of the implementation/progress situation of such policies and measures; guidance on investment by local enterprises which opt for the introduction of foreign capital; declaration and control of the rights of enterprises to import or export products
- (10) Establishment of an economic and trade information network for the city; gathering and publicity of various economic and trade information/data at home and abroad; provision of reference materials for the formulation of economic policies by the municipal government; provision of information for enterprises
- (11) Quality control work and macroscopic adjustment of the technology policies of the municipal government; thorough implementation of international quality control standards; guidance on quality certification activities

(12) Import/export control of machinery and electrical goods; tender for machinery and electrical goods at home and abroad

The organization of the SMETC is shown in Fig. 5-2-2.

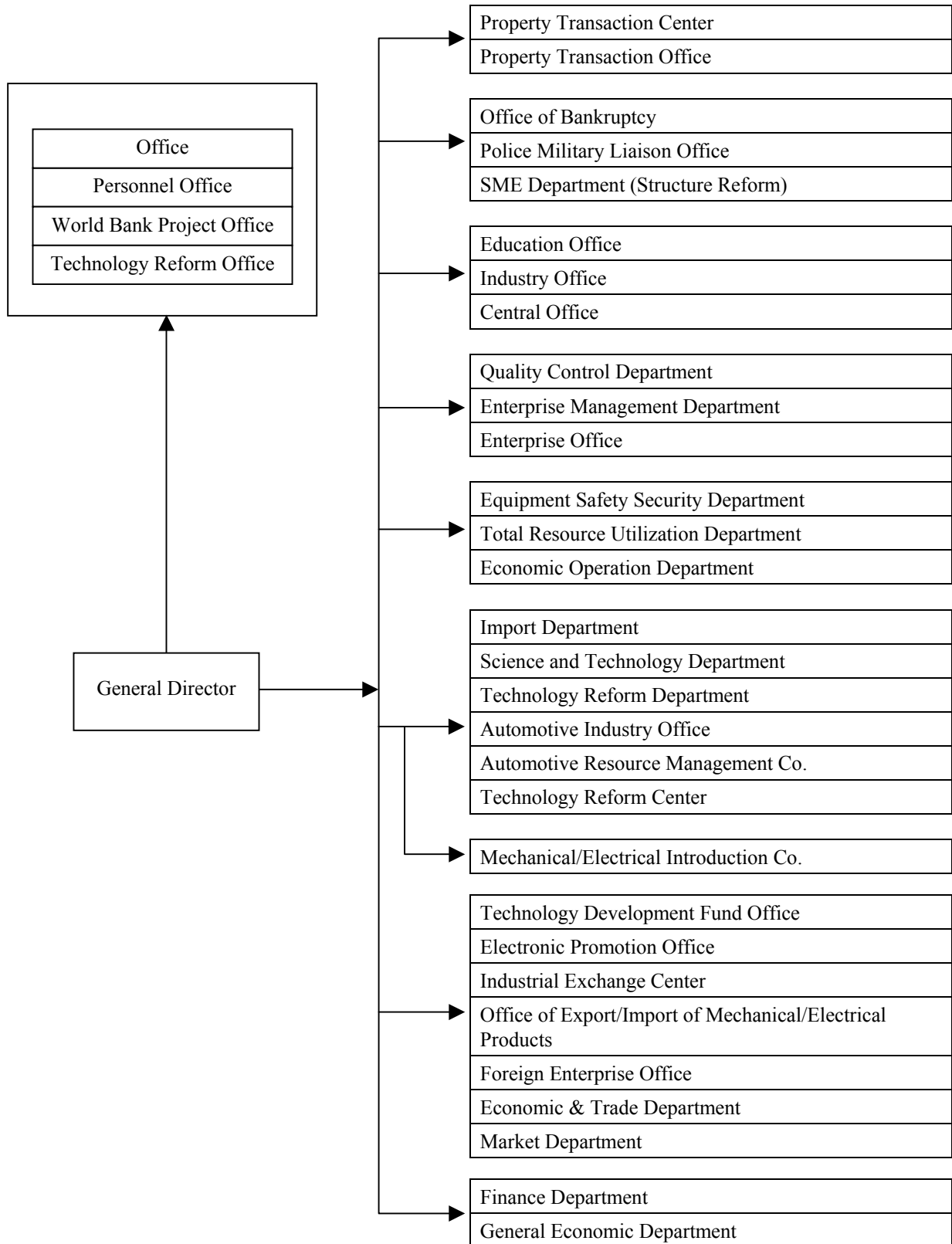


Fig. 5-2-2 Organization of Shenyang Municipal Economic and Trade Commission

5.2.3 SME Office

(1) Organization

The SME Office of the SMETC was firstly established in early 1999. The reason for its establishment was the necessity to have a section devoted to exclusively studying the promotion of SMEs for the purpose of intensifying policy guidance and support coordination for the development of SMEs. The SME Office had eight staff members in October 2000 and in August 2001, the number was 3 due to the structure reform of the municipal government. The office is scheduled to be promoted to the Bureau by the end of 2001.

(2) Duties

- Support for SMEs facing difficulties in sustaining their business operation
- Promotion of financial mortgage arrangements
- Promotion of joint ventures with foreign enterprises
- Provision of opportunities for delegations from foreign enterprises to meet representatives of local SMEs when visiting Shenyang
- Promotion of preferential measures (taxation and others) decided by the municipal government

Trade of enterprise ownership

The following guidance is provided to smoothly transfer the ownership of enterprises for privatization of state-owned enterprises: approval of the inventory disposal at lower prices, deduction of the loss from the assets with the approval of the audit section to settle the profit and loss account, etc.

(3) Results of the Activities in the First Year after its Establishment

SME office has conducted the following work in the first year after its establishment;

- Study, examination and preparation of SME promotion measures. (currently in the process of studying, examining and drafting)
- Preparation for the establishment of the Shenyang municipal guidance team for SME coordination and development.
- Establishment of the SME Guarantee Center and SME Service Center.
- Holding of investment solicitation meetings, product exhibitions and trade negotiation talks for SME.

- Support for the formulation of asset reorganization plans and business reform plans for SME.

After the control of SME was transferred from the city level to the ward level, the total number of enterprises under the municipality reached about 400 as of June 2001.

5.2.4 Shenyang SME Business Advisory Center

Shenyang SME Business Advisory Center (SMEBAC) was established in December, 2000 pursuant to the plan that the National Economic and Trade Commission was to set it up in each city over the county, and hereafter, this facility is going to be established on the ward level.

SMEBAC was established on the basis of Meridian Consultants Limited, and its capital consists of the following:

Investment Project Office (World Bank Project Office)	50 %
Meridian Consultants limited	33 %
Technology Evaluation Office	17 %

Meridian Consultants limited is a consulting company established in 1998 related to the Economic and Trade Commission and has been growing with the help of an overseas support organization in U. K., DFID (Department for International Development). It is also a counterpart of DFID and JICA at present.

< Outline of Meridian Consultants limited >

Established	:	July 1998
Investment composition	:	Investment Project Office (under ETC) 51 % Private collective enterprise (one of the largest enterprises in Shenyang) 49 %
Employees	:	10 (7 out of them are consultants, most of them having MBA)
Outside specialist	:	Several tens of college professors and those from the government, industrial associations, law firms, accounting offices and tax firms, etc.
Business	:	Management consultation (information service, enterprise and management reform, promotion strategy for

enterprises, financial consultation, fund procurement, market research, market planning, finance, quality control, production control, support for starting business of those who were forced to retire due to economic slump, joint training of industrialists and managers, support for international cooperation projects), seminars, lectures, overseas study tours for training course, set-up of enterprise information network service stations in Shenyang, provision of technology, products and market information for enterprises on internet.

Business results : Planning of the management strategy for an ice-cream company of a small scale, support to overseas market development for a casting enterprise in the province. (This support led to a successful OEM export to an casting company in the U. S.), personnel training, seminars, support for management for overseas oriented SME at the time of the business start-up, and support provided to an enterprise diagnosis group from Japan as a local consultant when JICA made the first field study on the SME promotion project in a model city in China (Shenyang).

Incidentally, this Meridian Consultants Limited changed its name to Shenyang Modern Business Advisory Co., Ltd. in 2001.

SMEBAC was established only recently, so that its practical activity will be seen from now on. Support for SMEBAC by DFID is scheduled to be provided for 100 % in the first year, 70 % in the second year, 30 % in the third year and none after that. They are now in the second year and currently they are accepting more requests for consultation. At the time of the business start-up, the activity of SMEBAC is not limited to SMEs in order to obtain profit, but will gradually shift the priority to the original purpose of addressing SME.

SMEBAC is based on Meridian Consultants Limited in terms of personnel and function and both of them are practically the same in light of management, staff and offices.

The Shenyang Municipal Economic and Trade Commission (SMETC) have officially nominated SMEBAC as a counterpart to implement the international partnership business in the pilot projects conducted by the study team.

5.2.5 SME Business Service Center in Datong Ward in Shenyang

Following the municipal service center, they are firstly planning to set up three SME Business Service Centers on the ward level and then spread them over to all the 13 wards before the end of 2001. The plans of Datong qu, a model ward, are described below:

(1) Concept of SME Business Advisory Center in the Ward

Taking the initiative in the wards, Datong Ward has a plan to establish a business advisory center in May-June, 2001 to support their SME progress. The name of the center is “Economic Service Center in the Ward”. The center provides consulting windows to protect the legitimate rights of SME in accordance with laws and procedure services such as business permission or registration of corporation as well as support service for information consultation.

Being ahead of other wards, Datong Ward is taking the initiative in studying and practicing support service for SME. It is said that this Ward fully studied the function of each service center in Shanghai, Wenchu and Beijing which are advanced districts in the service of support for SME and then considered their own service functions in Datong Ward after selecting merits out of these centers.

(2) Functions and Contents of Each Sector of Support Service

The functions of each sector of support service in the Economic Service Center in the ward are shown below: They are going to make a consistent standard of tax collection together with the establishment of law support centers as consulting windows for the purpose of protecting the legitimate rights for SME pursuant to relevant laws.

They provide the information consulting sector with service functions that will supply information needed by SME, for instance, technology information, personnel information, market information, etc. Furthermore, they conduct such business as land dealing, funding, providing technology and dispatching entrepreneurs (managers) in order to provide functions to assist the procurement of necessary elements for production.

On the other hand, the Center will integrate “Management Association” and “Industries sector Association” which have existed as different organizations, into the Economic Service Center to practically improve and complete the functions of each association.

Moreover, the Center will unify all the procedures of business permission and corporation registration so as to simplify the procedures and cut down the related expenses by “One Stop Service”. At the same time, while the Center will mitigate the regulations related to market scope or fields for SMEs to be able to take part in, they will also ease the standard on withdrawal.

(3) Finance Assistance as Another Function of “One Stop Service”

Datong Ward has a plan for the Center to have a function of “One Stop Service” in order to improve the service for SMEs. The plan is to unify the functions related to the support service into one for user’s convenience.

Economic Center in the Ward is a single organization, but the preparation for the establishment of “Credit Guarantee Fund in the Ward”, a different organization, is in progress in the same building.

According to the plan, there will also be another organization in the Center that has the function of financial assistance for SME facing difficulties in getting loans because of the lack of their credit due to insufficient collateral and the like. In the beginning, they will prepare the funds in RMB 5 million from the ward finance, on which they will make financial assistance up to RMB 40 million.

(4) Drastic Simplification of the Procedure of Business Approval

The simplified service started in Shenyang is so drastic that even Japan does not have a similar example. Generally speaking, various procedures are needed in corporation registration or various business approvals at the time of starting business. It requires a lot of time and labor to complete the procedures as the process windows of starting business and business approval are scattered in line with the variety of business.

As it required 2-3 months to complete the procedures, they introduced “One Stop Service” to enable them to be finished at one spot. By using this, the time of the procedure is shortened up to only 4-10 days. Such service centers are being established in Heping and Hanggu wards. In Hanggu Ward there are ten odd users in a day on average.

(5) Support for Privatization and Restructuring

The municipality transferred the control right of state-owned SMEs to Datong Ward (information as of June 2001). These enterprises had on average RMB 800-900 million in total assets, although they were poor enterprises with liability close to the total assets, so

that the burden was transferred to the Ward Government. The Government proceeded their privatization by dividing large-scale enterprises into small ones or by selling ownership or converting them to stock companies. As a result, it realized to privatize 80 % of them.

On the other hand, the Datong Ward Government is also proceeding with the support to activate SME suffering from management slump through industry conversion. For example, they activated a factory, a seamless steel pipe manufacturer whose operation had been stagnant, by converting the factory into a building material market to obtain income through earning the rent or the maintenance fees of the factory building.

(6) Development of Industrial Estate

The ward considers that estate is the most important element for production to attract private capital, so that they are now developing small industrial estates suitable to the ward and close to the area as well.

(7) Tasks and Trend of Establishing Ward Level Guarantee Fund

Meanwhile, there is also a trend to open a guarantee fund in order to provide the function of supplementing credit that promotes loans from banks to SMEs suffering from difficulty in getting loans due to insufficient credit because of shortage of offerable mortgages and so forth.

As to the system of supplement credit for finance, there is not yet a national institution comparable to the Credit Guarantee Association in Japan and they are still at the stage where a city level guarantee fund finally opened in the last September. The scale of the fund on the city level is still small and the number of loan practices themselves is also small.

In spite of such situation, there is also a trend to establish a guarantee fund with their financial fund provided by themselves on a ward level. Dadong Ward and Tiexi Ward are first in preparing for opening it in this summer. In the case of Dadong Ward, they have in addition to it, another idea to set up “Service Center for SME” that provides overall service such as simplification of business permission process, management support and information support.

One of the reasons for proceeding with support to SME by themselves on ward level like this, is that the SME support plan of the municipal government is not yet in the scope of their view. There still remains a task that the ward guarantee fund should refer to,

namely, the problem on the part of the municipal guarantee centers, where they applied such a strict standard to credit examination that they have not yet realized as many loans as expected. This is partly because the fund is not enough yet, but mainly because they were so afraid of the failure in collecting the loaned money that the plan has not taken effect as the SME support measures.

(8) Facilities and Budget of the Service Center

The economic service center of the ward will be located on a space with 1,000 square meters of area after a ward-owned super market is remodeled. The estimated expenses for the remodeling are RMB 5-6 million and will totally be provided from the budget of the ward. The center will be arranged with 8 full-time staffers at first. They will be accepted from the ward government staff or private sector. Their salaries will be borne by the ward government. As 10-20 more staff members other than those eight are needed, the ward government employees are to be accepted from the existing administrative sections to serve concurrently.

The operational costs of the center in addition to the personnel costs will be covered by the commission collected from the users.

Currently, a "Project Team" to prepare for the functions and organization of the economic service center has specially been organized and 5-6 members under the leadership of the chief of the ward are working on the preparation.

(9) Economic Background of the SME Support in Dadong Ward

The ward has eagerly kept thinking of the necessity of the SME support, but failed in its realization because of totally insufficient finances. However, with the growing tax revenue, the conditions are finally ripe to support SME.

The tax revenue in 1999 was RMB 300 million and it increased to RMB 340 million in 2000. Although their total annual tax revenue amounts to RMB 800 million, the amount disposable by the Ward Government is the one mentioned above.

The increase in the tax revenue entirely depends on the economic growth of some 30 big enterprises in the ward. They are automobile companies like "Golden Cup Group", mining machinery factory and manufacturer of airplane engine, etc.

All other 3,300 enterprises are SMEs. There are 1,940 private enterprises that are smaller in scale such as those having 3-4 employees in number and RMB 200,000-300,000 in annual production. Besides them, there are about 16,000 individuals engaged in business.

It requires both planning ability and energetic actions on the part of the ward government as well as financial resources to be secured by fostering profit-making enterprises in order to take measures for SMEs on the ward level.

(10) Conception of Establishing the SME Service Center

The following is a plan provided by the Dadong Ward Government. This is a model conception to serve as a good reference for a SME service center.

On the basis of the purpose of establishment, business scope and service targets of the service center, they are planning to set up an inside organization pursuant to the concept of goof service, openness, responsiveness, effectiveness and practicability, and also planning to initially establish 6 divisions, 2 centers, 1 general office, 1 office, 1 association and 1 corporation within the service center. The name each section and its main business to be in charge of is shown below:

- Division of General Administration and Adjustment

Administrative control, real estate management, personnel and document management and guest reception.

- Division of Consulting Service of Technology Information

Information collection, registration, compilation, control, delivery, etc.

- Division of Personnel Exchange Service

Invitation and introduction of competent persons from various sectors who are indispensable for the fields of production management, technology promotion and innovation of the administration to support enterprises, and mutual supplement and exchange of human resources among enterprises.

- Division of Complaint Handling and Legal Assistance

Provision of legal consultation for SME without charge. Provision of lawyers and legal advisors for SME. Provision of professional legal support, agents for lawsuit, document examination, etc. for SME.

- Division of Contact for International Joint Ventures and Tie-Ups
Projects of joint venture and tie-up between Japan and China.
- Division of Entrepreneur Training and Enterprise Diagnosis
Planning of entrepreneur training annual training as well as finalization of the training methods and contents.
- Credit Guarantee Fund
Provision of credit guarantee to SME in applying to local banks for RMB loans.
- One Stop Service Center
Provision of services to new enterprises for the entire process from approval of the examination at the preliminary stage to the acquisition of the business permit.
- General office for big projects
To be in charge of the contact with main projects of colleges and institutions and continuously make efforts in keeping continuous mutual communication.
- Agent office for ownership transactions
Qualification examination of ownership transactions, assets evaluation, transaction certification and application approval for the industrial and commercial enterprises belonging to the ward.
- Entrepreneur Association
Implementation of learning, talking and debating on policies related to national economic development after organizing entrepreneurs.
- Consulting service corporation for enterprises facing bankruptcy and amalgamation
Provision of consulting service on bankruptcy and amalgamation for enterprises.

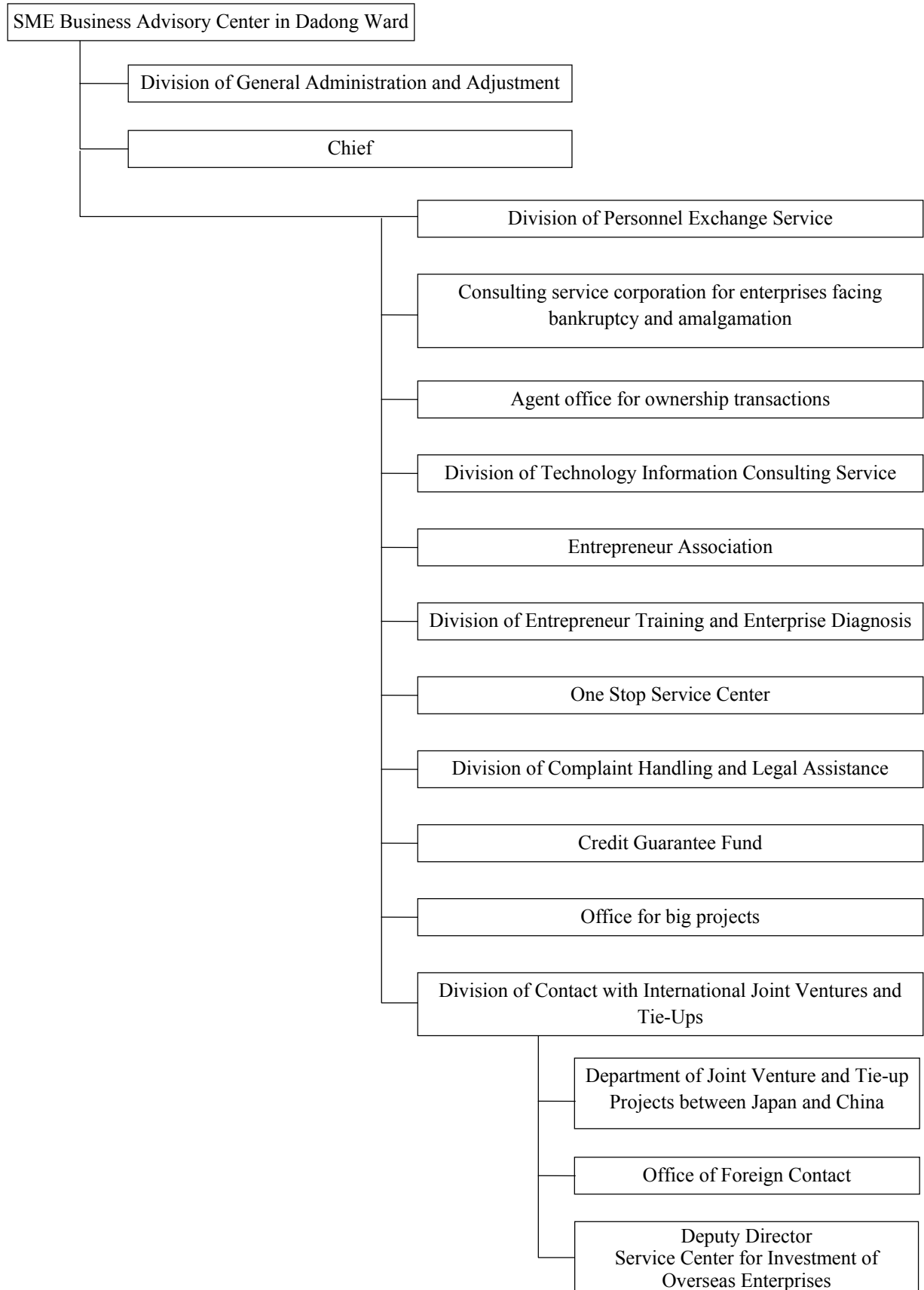


Fig. 5-2-3 Organization of SME Business Advisory Center in Dadong Ward

5.2.6 Shenyang Credit Guarantee Fund

(1) Introduction

Shenyang Credit Guarantee Fund, under jurisdiction of Shenyang Economy & Trade Commission, is an implementation agency of a China-UK Cooperative Project-State –owned Enterprise Restructuring and Development Project. Its main business is to provide credit guarantee fund and intermediary services to SMEs.

The staff of Shenyang CGF, recruited through public competition and examination, includes certificated lawyer, certified lawyer, certified public accountant, certified public assets evaluator, computer engineer and high-quality persons with Doctor or Master Degree. The numbers of the staff is 10 persons. It began the work in September 2000.

(2) Organization

The organization of Shenyang CGF is consisted of five departments as shown in Fig. 5-2-4.

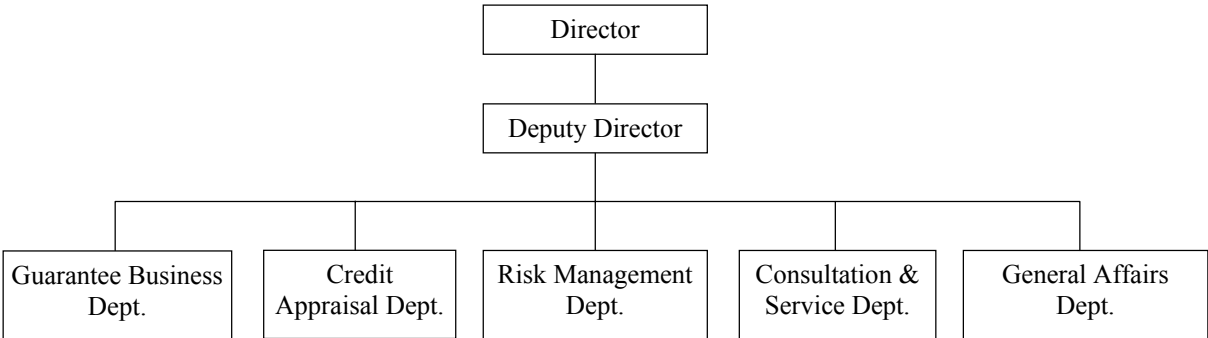


Fig. 5-2-4 Organization Chart of Shenyang CGF

(3) Guarantee Procedure

- Enterprise submits application of membership
- CGF approves application subject to review
- Enterprise submits application of borrowing to partner bank of CGF
- CGF conducts appraisal to enterprise
- CGF signs Guarantee Contract with partner bank and Counter-Guarantee Contract with enterprise
- Partner bank issues loan to enterprise and send Lending Notice to CGF
- CGF officially assumes responsibility of guarantee and supervise performance of guaranteed enterprise

- Enterprise repays loan, then Guarantee Contract is ended

(4) Guarantee Business

- Object of guarantee: SMEs with various ownership systems mainly support high-tech SMEs, labor-intensive SMEs, exporting SMEs and environmental protection SMEs.
- Type of guarantee: Guarantee of working capital loan.
- Scale of guarantee: Less than 1 million Yuan.
- Maturity of guarantee: Within 1 year.
- Proportion of guarantee: No higher than 70 % of loan amount.

(5) Consultation Business

- Management consultation
- Strategy consultation
- Market research
- Law consultation
- Finance consultation
- E-commerce

Consultation service is offered to member enterprise that pays membership charge of 2,000 Yuan for two years.

(6) Contacts

- Address: 12th Floor, Koh Brothers Building No21, Beijing Street Shenhe District Shenyang China
- TEL/FAX: 86-24-82510422
- URL: <http://www.sy-cgf.com>
- E-mail: Webmaster@sy-cgf.com

5.2.7 Private Sector Economy and Development Promotion Committee

(1) How the Private Sector Economy and Development Promotion Committee was formed

How the Private Sector Economy and Development Promotion Committee was formed and its functions to contribute to the society are as follows: The Committee was formed in 1998 to promote the economic development of the Municipality of Shenyang by coordinating the propriety structures of the state-owned enterprises.

(2) Service Functions of the Committee

To organize and project the Municipal Private Sector Economy and Development Plan.

On behalf of the Municipal Government, to draft the local rules and to guide and coordinate the services, control and supervision for the related sections of the private sector economy, or to guide the jobs of social groups and organizations such as the private sector economy associations and academic societies.

(3) Status of the Development of the Private Sector Enterprises

The development of the private sector enterprises for 3 years to the year 2000 was remarkable, marking the growth rate of more than 20 % per year that is twice as much as the growth rate of the total Municipality. The GDP of the private sector enterprises in the total Municipality reached RMB 54.2 billion in 2000 that is 48.6 % of that of the total Municipality. The amount of their tax payment also reached 40.3 % of the total Municipality. Included in these private sector enterprises are privately owned companies, individual companies, township-village enterprises, stock companies and group companies.

(4) “Dongyu Enterprise Group Corporation”, the Number One for the 3 Consecutive Years

The number one excellent company representing the private sector enterprises is “Dongyu Enterprise Group Corporation”. The amount of their tax payment in 2000 was RMB 61.69 million that was 3 times that of 1998. They ranked at top on the list of large tax-payer enterprises for the last 3 consecutive years. Now, 60 private sector enterprises have marked over RMB 100 million in the annual amount of manufacturing or sales. Also, in the total state, among the top 500 enterprises, 12 are private sector enterprises from the Municipality of Shenyang. The ratio of 2.4 % is ranked at the fourth largest of all Municipalities.

(5) Increase in the Number of the Secondary Industry Enterprises

So far, more private sector enterprises have been in the third industry like the service industry. However, the number of the secondary industry enterprises with the registered capital of more than RMB 1 million is increasing and has already reached 38.2 %.

(6) Social Contribution to the Municipality

Private sector enterprises are greatly contributing to the society. They have absorbed 1 million restructured workers and offered them jobs. Also, to promote the reform of the state enterprises, 1,771 state enterprises have been converted to private enterprises.

(7) Development Strategies of the Private Enterprises

In the future, under the development strategies for the private enterprises, the Municipal's manufacturing and assembling industries shall be maintained and established. At the same time, the improvement of enterprise quality shall be promoted.

1) Targets in figures for the fiscal 2001

To increase the GDP of the private sector enterprises to more than RMB 60 billion (a share of 50 % in the Municipality) and the amount of the tax payment to JMB 4 billion (a share of 40 %).

2) Furtherance of administrative services

To improve the characteristics of the administrative organizations to serve private sector enterprises.

3) Maintaining and establishing the environment for development

a) Reduction in cost sharing :

To avoid charging donations, membership fees, penalties to the private sector enterprises above the regulated limitations and to establish a system to penalize in case any extortion meeting should be found.

b) Promote intermediation for financing :

The Committee to serve as an intermediary financial institutions and the private sector enterprises that have difficulties in finding financing.

c) Introduction of direct financing :

To encourage strong enterprises to resort to direct financing by transforming themselves to stock companies, by issuing short term bonds, or by listing their stocks on the second stock market.

d) Enriching the Fund :

To increase the size of the Fund of the Credit Guarantee Center to RMB 40 million during the fiscal year 2001 from the present level of mere several millions by inviting social capitals by means of partnership system and stock system. The risk-taking investment fund shall also be promoted.

e) Privatization of the state-owned companies :

To acquire or reorganize bankrupt or nearly bankrupt state-owned SMEs by means of acquisition, leasing or joint venture, and privatize them to improve them.

f) Strengthening of the open-up policy :

To liberalize the regulations on each industrial sector and encourage joint ventures with or entrance of foreign companies. To promote improvement of chances for SMEs to export directly by qualifying them under certain conditions.

g) Promotion of privatization of the public works :

To promote privatization of the public works, for instance, by privatizing the bus transportation business to give business chances to the private sector.

h) Promotion of modernized enterprise managements :

Aiming at catching up with the modernized enterprises of the present day international levels, to improve the private sector enterprises in the Municipality to those with more sophisticated organizational structures and to lead their product structures to include more of the technology related factors.

i) Education for the management :

Targeting at modernizing enterprises, to set up the training center for the education of the MSC executives to improve their decision-making ability and organizational ability, etc.

5.2.8 Shenyang Property Transaction Center

Shenyang Property Transaction Center (Referred as “Property Center” from after) is an organization of enterprise juridical person and a subsidiary of SMETC. It was established in March 1994. Today, it is operated by an income from service fee and not from the government spending it by fee profit currently. When it was established, the ETC, the state asset management bureau the institution reform commission, the industry and commerce department funded the Property Center by 400 thousand Yuan respectively that amount 1,600 thousand Yuan in total. Other business contents of the center are as follows:

- Construction and management of proprietary rights resale market

- Collection and dispatch of information about proprietary rights resale
- Examination of proprietary rights resale contract
- Enforcement of proprietary rights resale procedure

In addition, the accompaniment business of proprietary rights resale and capacity of the service product right center are 25 people, and the current being on the register roll number of people is 19 people on February 22, 2001. A person engaging in proprietary rights buying and selling is ten people, two information network sections, 2 general affairs department gate 4, financial affairs accounts section 3. I was subsidiary, and the valuation of property section which there was became independent according to an independence juridical person lesson to let you change into it once in a valuation of property section of government. The member of proprietary rights buying and selling section of a business section composed it with the person who majored in finance. In addition, by relation on-the-job, I do ten places of valuation of property offices, law office four places and a business tie-up. There is a substitution office in a ward prefecture of Shenyang city 13 other than the main body entirely (for each around 8-12 people scale). Relation of the product right center and a substitution office is only relation on-the-job, and personnel affairs, a budget become the jurisdiction of a ward prefecture.

An administration method takes a membership system and has 18 members currently. As for the member, they are from state ownership assets management company, an investment company, a brokerage firm, a large-sized company group in addition to the state assets management station, the industry and commerce administration bureau, land bureau which are government section related to proprietary rights.

I let the product right transaction center received municipal administration is policy of reinforce foreign capital, private, township-village enterprise, and revitalizes state-owned enterprise policy in 1997, and activity become active. It got rid of a qualification limit of the purchase side and appealed to every domestic and foreign investor including an individual for the purchase. As a result, among 1,700 companies sold through the center during seven years by the establishment of 1994, the thing after October 1997 counted 1,200. In addition, the center fielder did a buying and selling fee for one year with being free of charge in 1998 in order to promote buying and selling. An usual buying and selling fee is 0.05-0.5 % of the amount of total assets of a sale target company in addition to above. Because in late years a good company of assets contents has finished almost selling it but, at the uppermost limit state includes the making a promise number.

Table 5-2-1 Business Results of Shenyang Property Transaction Center

Year	Number of agreed sale of enterprise	Total assets (RMB million)
1994	10	293
1995	9	791.43
1996	29	533.63
1997	45	414.13
1998	975	6,340
1999	71	1,090
First half of 2000	77	640
Total	1,216	10,012.19

Buyers are not only firms and individuals in Shenyang but also firms in Shanghai. However, a company of Shenyang city there is you, and, in addition to an individual, there are the results Shanghai city, Henan, company of a city (privately-managed there is you, stocks).

An information network section of the property right center was established by support of the World Bank, and a training project of the World is working currently.

A flow of proprietary rights buying and selling in the property right center is as follows:

- Examination to a resale target company and valuation of property (valuation of property is done by 80 independent accounts offices employing more than eight public certified specialists for property evaluation.
- Submission and approval of banks and creditors agreement and employee measure (I keep the employment in my mind) plan and approval.
- Finding purchasers who satisfy above conditions, the buyers compile negotiations. (Credit investigation of the purchase side is not concerned with the center because it is the responsibility of the sale side.)

There are many the contents which the purchase side must obliged to carry out after the purchase in a fixed period (an incidental article) (the number of years, for example, to limit discharge of an employee, a debt full payment time limit), and there could be the second auction sell in the property right transaction center when I do not carry out these contract contents in the limited time.

5.2.9 Information Centers

(1) Shenyang City Information Port

The Shenyang City information center was established as a subordinate organization of the planning committee in the city in order to advance the information technology promotion of the city. In 1997, Shenyang IT office was established in order to open "Information center". The task of the information port (70 members) is mainly to reply for the needs for promotion and planning of IT in the city government. Information port is also providing software developing, building up of enterprise database (data are publicized collectively by city government), and disclosure of information to citizens.

The facilities of information port are fairly good because of gratis supply and loan from Japan. The port is promoting enhancement of infrastructure, removal of facilities and expansion of communication line for the increase of users.

The IT port setup plan has been developed rapidly under the five-years plan. It has already completed nine information network projects, and it is constructing 12 databases at present.

In addition to this, it plans or practices followings:

- Shenyang terminals: monitors are settled at hotel or other place in the city and any people can use them. It is planned to settle 300 terminals in 2000 and 1,000 terminals in 2001.
- City card station: for the payment of taxi fee or lighting and heating expenses
- Furnishing of communication lines: optical fiber for communication and cable television
- Personal computer production: joint venture with Sanbao group in Korea, 1.2 million sets per year for export, started in the end of 1999.
- Peripherals: Changbai group (printers, formerly with Epson), Beitai group (CRT) etc.
- Software company: NEUSOFT Corporation (joint wit ALPS), Dongdong software (joint with Toshiba)

Besides, as collaboration project with Japan, in 1998 it has begun to execute Chinese and Japanese information technology promotion project including six projects of agriculture, medical care, education, remote control, geometric information system and disaster prevention. Shenyang City information technology promotion committee is concerned in three aspects (agriculture, medical care and education) in these and Shenyang

information port is participated also. The city plans to divide the organization in the near future as follows. (Started substantially while following the procedure now).

- 1) Industrial technology intercourse center
- 2) Economic and Trade Commission information center
- 3) Technology creation service center

(2) Economic and Trade Commission Information Center

Recently, “Economic and Trade Commission Information Center” and “Technology Creation Service Center” were established under city Economic and Trade Commission.

Economic and Trade Commission Information Center covers to build up and to operate Economic and trade commission information network in Shenyang based on the total concept of national Economic and trade commission, and started to service on December in 2000. This information center is determined to be the receiver of Shenyang SME information network that is realized as pilot project of this investigation team.

Technology Creation Service Center just started in order to provide hyper technology information services for small and medium enterprises.

Both centers were departed from Economic and trade commission Technology intercourse center (established in 1969) and were practiced by using the facilities of Shenyang information port. SME information network is planned to collaborate with Federation of Industry and Commerce. Federation of Industry and Commerce participates as the organizer of the total system.

(3) Information Center of Science and Technology Commission

Science and Technology Committee also has information center. This center started to service in 1999 for “Shenyang District Service Net” as the level of the province and the city composing a part of the PP-net that the State Science and Technology Committee sponsors.

The PP-net is basically for the small and medium enterprises. Though the net opened in 1999 in Shenyang City, 1,200 companies and 7,000 items have been registered in one year. The service menu contains the following items.

- Solution by tender of difficult problem of small and medium enterprises
- Human resource information (500 people are registered in Shenyang)

- Financing information from the inside and outside of the country
- Opening of achievement information on enterprises to the public
- Consulting for planning project

As for network services, the center is not expecting the income from registration and advertisement but is planning the income from value-added services and consulting fee. Value-added services are composed of products design, marketing, feasibility study etc. and data are retrieved from 100 sectors database automatically and are provided to users.

100 companies have made their homepages of the enterprise introduction in charge from 150 to 200 RMB per page.

Service items of Shenyang district PP-net contain enterprise information, human resource information, consulting, establishment fund, ISO certification etc. and it is connected to human resource center network as for human resource. Concerning to IT promotion, Xian and Shenyang are designated to become core. In the case of Shenyang, proposal for the fund through network becomes 50 companies or more and consulting works and report making for several companies are finished already this year.

5.2.10 Industrial Technology Exchange Center

Shenyang Municipality Industrial Technology Exchange Center was established in 1969 and its priority is placed on enhancement of four themes, namely new technologies, new materials, new manufacturing processes and new products. Although, in the past, the Center has been more supportive to the large enterprises, recently it has changed to be more oriented to SME support.

The Shenyang Municipality Industrial Technology Exchange Center now maintains the following three networks:

- Shenyang Economy and Trade Information Network
- China Technology Creation Shenyang Network
- Shenyang SME Information Network

A ceremony of public opening of the Economy and Trade Information Network was held at the end of November 2000. At that time, the establishment of the Shenyang SME Information Network was also announced. The details of the Shenyang SME Information Network had been almost worked out and the outline of the idea of the three-year plan was also revealed.

The number of the staff of the Information Center is planned to be increased from the present level of 5 to 6 people.

The activities of the Center are focused on the spread and application of the processes for the new product development and on the retarded industrial and technological reform.

Being a non-profit organization, it is engaged in the activities that cannot be handled independently by either the government or enterprises, thus playing the role of intermediary offering the bridge between them. Also, to encourage the coordinated works among the industrial, academic and research sectors, it is supporting the transfer to the industrial sectors of technologies that are the fruits of development by the research institutes and universities.

It is pointed out that one of the problems SMEs are facing is the retarded manufacturing technologies and the level of product technologies that are not competitive in the international markets.

This is due to the low levels of culture and expertise in scientific technology of the executives. It largely owes to the fact that most of the enterprises are township-village enterprises.

In 1999, the government announced the policy of social appropriation of the technological resources and enhancement of the technological levels. State Economy and Trade Committee constructed the Technology Creation Networks and inaugurated 40 service stations throughout the country including the Municipality of Shenyang. This network is offering technology services to the private sector enterprises.

On this network are :

- Results of studies at universities and research institutions
- Products and technologies from all over the world
- Information on certain enterprises

The followings are how to use the networks :

- Introduction of enterprises to possible future partners
- Support to marketing of enterprises wishing to sell their products
- Information on the demand and supply of personnel
- Information on the demand and supply of specialists

Results of the above mentioned activities are being announced by the Department and the Municipality.

100 questions are asked daily to the Technology Exchange Center of the Department, and business negotiation meetings among the industrial, academic and research sectors are being held once a year. Although 9,000 items are proposed to the meeting, they cannot be seen on the networks. The Department has the New Technology Spread Center which is supervised by the Department's Economy and Trade Committee.

Notices are issued by the Department and sent to more than 1,000 enterprises. More than 120 universities and research institutions are invited to report the results of their studies. During the meetings, discussions on certain matters, business matching talks and even signing of the letters of intent are conducted. Exhibitions for business matching are held at the same time.

Science and Technology Committee is engaged in the similar kind of activities and the activities are divided in accordance with each new technology project basis. Economy and Trade Committee is based on the needs of enterprises.

For industrialization, the mutual support service system is under way by means of introducing to the Credit Guarantee Center when funds are needed, and to the Technology Exchange Office when new technology is needed.

5.2.11 Training and Education Center

(1) The role of the Center for the Economy Management Officers

To be called as the Training and Education Center for human resources is the Center for the Economic Management Officers that belongs to the Shenyang Municipal Economic and Trade Committee.

Training and education by the Center have been mainly targeted at the factory managers and accounting officers of the state-owned large enterprises. Now it is offering training and education for the managers at the state-owned large corporations, at the offices of public entities and also for the executives and managers at SMEs.

(2) Examples of Training Contents: State owned large and medium sized enterprises and SMEs

1) Training policies (By the policy of the government, limited only for the managers at the state-owned large and medium sized enterprises)

- a) Whom to train and how often : Trained totally 258 people in four times during the period 1996 to 2000.
- b) Training organization : Economy Management Training Center (the virtual location is at the Liaoning University's School of Industrial and Trade Management Studies)
- c) Terms and number of participants : For 2 months and a half on leave from office. Average number of participants is 65 people.
- d) Training contents : Theoretical training (that includes the following MBA contents) and practical training (training to solve the up-coming problems), Management Economics, Economy Laws, Corporate Treasury, Accounting and Booking, International Financing and Trade, Corporate Strategy Management, Production Management, Marketing, Market Economics, Ways and Means to lead Corporations and Study of Corporate Diagnosis
- e) Cost of training : Mainly borne by the state, partly borne by enterprises

2) Examples of training for SMEs

- a) Whom to train and how often : Corporate executives and managers of the private sector enterprises. The number of enterprises to be trained is quite limited
- b) Training organization : Liaoning University's School of Industrial and Trade Management Studies
- c) Term of training : Between several weeks and one month. Lecturers from the above-mentioned school visit the enterprises to give lectures
- d) Training contents : Marketing, Sales Business, Ways and Means of Corporate Management. Corporate Diagnosis and Corporate Planning.
- e) Cost of training : Totally borne by the enterprises

(3) Work Flow of Education and Training

The workflow of the education and training that the Economy Management Center deals with should be described as follows. Firstly, the project of education and training shall be

planned at the Education and Training Conference of the Economic and Trade Committee. In line with these projects, the Education Office of the Industry Department of the Economic and Trade Committee drafts up the list of names of enterprises to be trained.

The Center for the Economy Management Officers checks the list of names of enterprises and people to be trained that are sent in from the Center for the Economy Management Officers. The Center produces curriculums in line with the Project of Education and Training and sends them together with the lists of names to the teachers at the universities nominated by the Economic and Trade Committee. The Industry Office sends the education curriculums to the universities on the lists and the lecturers at the universities practice the training based on the curriculums at the Liaoning University's Industry and Trade School and Economy and Management School.

(4) Education Facilities of the Center for the Economy and Management Officers

At present, this Center has no education facilities of its own and is utilizing the school buildings of the Liaoning University. The Center for the Economy and Management Officers only has office rooms and no classrooms. It has a plan to construct a human resources training center with 14 classrooms which is yet to be realized.

(5) Items to be studied on Education and Training

The past advertisement for temporary training has not been effective in gaining full recognition of enterprises in general. Managers from various enterprises have been sent for training to a certain location on leave of their jobs. But such training usually takes two months and a half. A study of new means to solve this problem is under way.

According to the consultants in charge of human resources training in the Study Team, what are important as the means for advertising temporary training program are "setting of the themes" and "setting of training timing". After setting a timing, consideration must be given to what theme in which field of management could call best attention and the best catch phrase that can appeal to people must be worked out. Participant's satisfaction has to be always considered.

As for the magnitude of the themes, medium ones are said to be desirable. When the theme is too heavy, the range of those to be trained becomes wider and as a result the contents tend to become too abstract. On the other hand, if the theme is too limited, the contents tend to be very concrete and specialized. As a result, the range of those to be trained becomes very limited.

For advertisement, the posters should be eye-catching ones and they should be posted at places where many people gather. Posting of the posters at the public offices and the financial institutions is very effective.

(6) Study of Future Training Contents for SMEs

Training in the past has been targeted mainly at the managers at the state owned large and medium sized enterprises using contents made by the State Economic and Trade Committee.

In the future, training of the SMEs must be considered. Since some of the existing contents do not fit to SMEs, the contents that best fit to SMEs must be worked out.

However, at present, the guidance by the Study Team is still expected. Recently, the State Education and Training Conference decided on two education purposes, which are “Contemporary Enterprise Systems” and “Basic Rules of WTO”.

According to consultation by the Study Team, these two purposes could turn to be attractive if some wisdom should be added. For instance, in the case of training aimed at “Contemporary Enterprise Systems”, the training themes themselves should be subdivided so that the learners can easily get the concrete idea on the contents and the training programs should be designed to include concrete case studies. If possible, the theme contents should be further pinpointed and include questions on concrete cases so that the learners can discuss in groups to draw right answers. Since answers are not limited to one, all the groups can join the discussions.

5.2.12 Shenyang World Bank Loan Industry Project Management Office

The business units (Public service corporations) under The Shenyang Municipal Economic and Trade Committee are playing the role of liaison office of the international support organizations such as the World Bank, DFID, and JICA. This general office includes the SME Promotion Project Support Office.

At present, the Shenyang World Bank Loan Industry Project Management Office has a budget of US\$ 20 million for the electronics, medicine manufacturing and machinery sectors. This budget is a result of a decrease in the budget for the machinery sector from US\$ 60 million to US\$ 40 million, but it will be utilized together with the granted loan proceeds of US\$ 40 million.

Invitation for applications for the Project Funds is made public by the Government that announces the Priority Industry Development Plan at the People's Representatives Assembly. The enterprises submit their own study results through the Item Proposal Offices. Large projects are managed by the Technology Improvement Office and medium and small projects are managed by each related offices. Shenyang World Bank Loan Industry Project Management Office is subsidized by the Government for 30 % of its budget and the remaining 70 % must be raised by itself.

5.2.13 Township-Village Enterprises Administration

(1) Outline of Township-Village Enterprises Administration

There belong about 184 thousand enterprises (897 thousand employees) to township-village enterprises administration in Shenyang. Among 184,000 enterprises, there are company limited 88, limited liability enterprise 1,018 joint venture enterprise 418 and private enterprise 182,476. In 1999, total amount of products was 1489.2 billion RMB (increased 19.1% from previous year), income was 103.1 billion RMB, export was 2.1 billion RMB, profit was 8.76 billion RMB, and tax payment was 996 million RMB.

The types of business are more than 40 such as machine, processing, construction, foods, brewery, clothes, pharmacy, electronics and agricultural byproducts etc. Looking of scale, there are 50 of enterprises groups among them, more than 10 thousand RMB in product amount is 32 companies, more than 5 million RMB is 255 companies, more than 10 million is 154 companies, and there also exist enterprises beyond the criteria of small and medium enterprise.

(2) Facilities of Township-Village Enterprises Administration

Township-Village Enterprises Administration has four facilities of management, adjustment, service and supervision. The contents are as follows:

1) Management

Township-Village Enterprises Administration was established in 1978. At first, though it began lower level production of blower and drier as side business in agricultural off-season, it grows every year and the product amount reached to the scale of 100 billion RMB from several 10 million RMB in this 20 years. In 8th 5 years plan, declared to township-village enterprises administration five administrating theme of scale, industry, enterprise, science and technology and human resources.

a) Scale

It is regarded important to manage according to plan, it aims the Short-term growth of 20 % per year, and long-term growth in accordance with national five to ten years plan.

b) Industry

Up to now, Township-Village Enterprises Administration had been focused on collaborating to heavy and large-scale companies as metallurgy and machinery, and depended on plans of the city. Today, next eight sectors are leading industries:

Agro-products, Electronics /Information, agricultural vehicles, bio pharmacy, novel construction materials, apparel processing, furniture manufacturing, precise chemical engineering

According to the five-year plan ending in 2005, the share of these eight industries is expected to be more than 65% of the total township-village enterprises' revenue.

c) Prioritized enterprises to be relieved

They are agro byproduct manufacturer, enterprises in the industrial zones, and SMEs of their sales is 50 thousand Yuan or less.

d) Management of enterprises

Development of five township-village enterprise development zones, and new construction of township-village enterprise development zones featuring new institution, new structure, new industries, new products, high technology, high grade of management, externally opened, excellent institutional environment, and other township development zones in 60 villages of wards and provinces. Among these, 25 will be controlled by the city, and 35 by wards and provinces. The total sales of the above development zones are planned to reach 107.5 billion Yuan. 2,100 enterprises employing 300 thousand surplus workers will join these development zones.

e) Science and technology

The township bureau intends to promote IT industries, high-technology machinery industry, novel construction materials, bio pharmacy industry, and

precision processing industries. By promoting acquisition of ISO 9000, ISO 14000, by 2005, 500 firms are planned to obtain certification. The bureau will foster 20 brand products in Liaoning province and license 100 trademarks.

The bureau intends to strengthen product engineering competence and market competitiveness.

f) Human resources management

The priority is placed on the vocational training which consists of the skill training and specialized technician training.

The bureau assesses skill capability and trains high-level managers of township-village enterprises.

g) Environment protection

Water treatment and refuse disposal are big problem in urban area of Shenyang city, but water treatment is a problem in the village area. Small plating factory was regulated before. At present, wastewater from foods factory and chemical industry are investigated and expected to be reported to the environment protection bureau. Besides, regulations for the enterprises that pollute water are strengthened, and it is required for new factory to attain three matters (production, pollution discharge and pollution remove) at the same time.

h) Finance

There are agriculture bank of China and credit association. The credit association is a bank for farmer and agricultural production. Banks for township-village enterprises are not only agriculture bank of China but also bank of communication and construction bank and so on. Financial authority has directed to give loan positively from these banks to township-village enterprises.

2) Adjustment

a) Adjustment of policies

There are several inconsistencies among policies because many policies are issued under vertically divided administration. For instance, as for reduction or exemption of taxation, it is difficult for a township-village enterprise to discuss with authority directly in the case of applying reduction of taxation for using

disposed material as raw material. In such case, township-village enterprises administration discusses with taxation office.

b) Adjustment of collection of social expenses

When an enterprise faces to business crisis because of income reduction or fund shortage at the business start up stage, payment of social expenses, can be exempted temporally according to adjustment by the township-village enterprise management bureau. There are comparatively a lot of such cases.

3) Services

a) Protecting of fair right of enterprises

According to “People’s Republic of China’s law of the township-village enterprises”, the government protects the right of township-village enterprises by adjusting and controlling of administrative actions through public hearing systems for administrative execution.

b) Services for management

The government executes production and management support specifically the training of managing personnel.

c) Services for technical aspect

The government enhances collaboration of high-level research institute and universities. It plans to build the science and technology development center and a complex of science / technology and industry.

4) Supervision

a) Supervision for industrial policies

The government supports agro products and high technology industries, and restricts environment pollution.

b) Supervision of management manner

Supervision of illegal management such as regulation or exposition for pseudo brand.

c) Supervision of security and environmental protection

Supervision for soil pollution and labor power management.

d) Supervision against authority.

It is announced from the state authority by document to inhibit abusing of authority.

(3) Organization of Township-Village Enterprises Administration

1) Organization

Township-village enterprises administration is composed of following four departments, one office and one center.

- Management, financial planning, science and technology, economic and trade office
- Enterprise Office
- Education center

2) Enforcement organization

- Science and technology association, Building material association, Executives association, enterprise association
- Inspection center (building material, daily necessities, chemical industry product)
- Education center (township-village enterprises college: for middle and high executives, collaborate with Liaoning university)
- Service center (adjustment service for daily problems)
- Quality certification center (supporting service for acquisition of ISO 9000 series certification)

As for managing territory of Economic and trade commission and township-village enterprises administration, Economic and trade commission should manage urban enterprises and enterprises in the village, and township-village enterprises administration should manage enterprises in the village. Township-village enterprises administration is affiliated with the state ministry of agriculture. In the former socialistic system, economic and trade commission managed state and collective enterprises, and township-village enterprises administration manages enterprises in the village, so there was no confliction between them up to now.

(4) Problems and Measures of Township-Village Enterprises

There is some difference between small and medium enterprises in urban and village. Enterprises in urban have no relation with community after they paid their tax, but industry in the village have developed based on agricultural resource, so it is obliged to serve for and return their profit to the village. For instance, Longchou foods processing company are processing rice and corn, and it has 20 thousand of farmers in the back. Farmers supply raw material to this company, so development of enterprise and farmers are unified. Furthermore, township-village enterprises have the function of relieving village poorness and absorbing surplus labor power, thus it has become important sector in Shenyang city.

Township-village enterprises have the following problems at present.

- 1) Shortage of human resources (shortage of specialty knowledge)
- 2) Shortage of highly skilled managing personnel
- 3) Low technological level, little knowledge and lack of high technology and high value-added products
- 4) Structure of industry and products is not rationally organized
- 5) Shortage of fund because of small scale and poor development ability

Against these problems, a report corresponding to 5 year planning will be prepared. The points of the report are as follows:

- 1) Structure adjustment: technology advancement plan based on agriculture
 - Adding higher value to agricultural production, Systematizing of processing, storing and transportation
 - Making of leading (dragon head) enterprise, especially bringing up and tying-up of urban large foods distribution industry
 - Construction of large base: grains, vegetables, flowers and meat processing
- 2) Relief of 8 leading industries and SME of less than 5,000 thousand Yuan sale
- 3) Fostering of high technology industry
- 4) Reinforcement of development zones: implementation of the “100 enterprises draw plan”, fostering of foreign currency earning large-enterprises and export oriented township-village enterprises

- 5) Open policy for abroad:
- 6) Promotion of network plan: construction of Shenyang business matching network, talent recruiting banks and project banks
- 7) Selection of growing enterprises, fostering of human resources and elevation of technology level

Township-village enterprises have become diversified from 10 years ago in accordance with privatization of state enterprises and change of village industry (increase of non-agricultural industry and urban type industry). It is required to change the definition of the sector for township-village enterprise and to reconstruct the policy.

5.2.14 State Science and Technology Commission : Ministry of Science and Technology, High-Tech Development and Industrialization Corporation

(1) Outline of the High-Tech Development and Industrialization Corporation

The scope covered by the High-Tech Development and Industrialization Corporation is for 4 sectors, i.e. information, automation, new materials and energy, and it controls the R & D and application of the high technology. It promotes and controls the R & D by way of project promotion method. The high-tech development zone of Shenyang Municipality is under the control of this corporation and there are total 3 high-tech development zones besides Anshan and Dalian in Liaoning Province. There are 53 development zones all over the country, to which, however, only macro control is made and the controls to the individual enterprises are not made and are left to the originality of each enterprise. The taxation (especially the favored policy) to the development zone is decided and implemented jointly by the State Council and the Ministry of Science and Technology. Besides these zones, development and technology parks are established near the universities. There are 15 parks all over the country. In Shenyang, it is located near the East-North University.

Under the Ministry of Science and Technology, there are 600 productivity promotion centers all over the country, which contribute to the promotion of the SMEs. The fund for the creation and innovation of SME is established and the invention by SMEs is encouraged. The fund of RMB 1 billion per year has been invested and the fund has been provided to 1,500 SMEs, which means RMB 700 thousand per each enterprise. This fund is controlled by the fund control center.

The Ministry of Science and Technology is one division of the State Council and does not control the enterprises directly. Its main function is to give support to the science and research in the financial aspect, in which Shenyang Municipality plays a special role. Namely, through the initiative by Premier Minister Mr. Zhu Long Ji, Shenyang Municipality is the model city in order to incubate high technology industry including the restructuring of the traditional industries. Therefore, the Ministry of Science and Technology is deeply related to Shenyang Municipality. The manner in which the Ministry of Science and Technology is involved is basically to evaluate the projects and to give financial support to good projects.

1) Measures to remodel the traditional industry into the high-tech industry :

- By adding high-tech to the traditional industry, it is developed into the new traditional industry.
- By rescinding the traditional Industry, it is transformed into the high-tech enterprise itself.
- The asset of the traditional industry (personnel, real estate, equipment etc.) will be transformed.

The above-mentioned 3 measures are available. The principle is to sort them out.

Note : The budget of the support of Shenyang Municipality is not known at present. The amount of the support is decided in accordance with the details of the project. It is officially decided by the resolution at the time of National People's Assembly of 2001.

2) Evaluation of the project

It is made by way of the tender and there are following three projects :

- Economic and Trade Commission: Mainly for the big enterprises and only a few cases for SMEs.
- The fund for the creation and innovation of SME
- For the individual projects

3) Promotion of science and technology and the financial support

In relation to the promotion of the science and technology and the development of new products, each of state, province and municipality will deal with it on its respective level but the state is mainly involved in the policy and fund, while province and municipality mainly in the support for fund. In either case, however, the basic task is the evaluation of the project and it can be said that the fund is liable to go to the big enterprise.

4) Budget and fund

The budget of this corporation is for the promotion of science and technology, and the receiver can be whichever of the big, medium or small enterprise. The fund is exclusively for SMEs and it includes the support of the high technology R & D, the subsidy for the interest to the loan, supplementary investment to the capital.

In relation to the three measures for the revival of the traditional industry, the relation between the large enterprises or high technology enterprises and the traditional industry is, in the case of Shenyang Municipality, mainly directed to the manufacturing industry due to the historical background. In the future as well, the principle would not be changed in that the wealth can be yielded from the manufacturing. If so, it should be considered, dividing it in the following three ways :

- The enterprises specialized in high technology are to consider about themselves exclusively, which shall be acceptable.
- SMEs, which are the cooperating firms of the big enterprise, will, in accordance with the extent of the large enterprise being diverted into the ones engaged in high technology, adapt themselves to such high technology correspondingly. In this case, it will be necessary from now on to sort out the problem, to that the intellectual property rights or patent rights of the new technology belong.
- Regardless of the high technology industry, there are also enterprise which find by themselves the way of progress in the traditional area.

5) Production Increase Promotion Center under the Science and Technology Committee

It started in 1992 and has history of 8 years. It is quite different from Department SMEs of Economic and Trade Commission which was established in 1998.

5.2.15 Shenyang Science & Technology Commission: Productivity Promotion Center

(1) Business Structure of Productivity Promotion Center

Principal works of this center is composed of following four divisions:

1) General information division

Gathering and adjusting of productivity information and works on general affairs

2) Information engineering division and Quality assurance division

Promotion of enterprise information (example: CAD/CAM technology propagation)

Consulting for industrial design

Network services for small and medium enterprises

Example: Install of information exchange network for SME in whole China [PP-net]

Consulting of acquisition and application of ISO 9000 for quality improvement (Different from certification; Subordinate of Oxford and Cambridge)

3) Project evaluation division

a) Feasibility study (FS) on “specific project” for small and medium enterprise promotion

Example: Evaluation of enterprise asset or achievement at loaning

b) Administration of society for technological industrialists (30 members joined)

c) Consulting by organized experts for specific enterprise

4) Small and medium enterprise division

Important project for promotion of general technology such as CAD/CAM executed here. Application of “Technical creativity fund in China” for small and medium enterprise is also administrated here (fund: 1,000 million RMB/every year).

(2) Members of Productivity Center

Total staff 32 persons (containing 1 doctor, 5 masters and 23 high rank engineers etc.)

(3) Users and Income Source of Productivity Center

The income source of this center is composed of various consulting services such as technical consulting for enterprise, information consulting, design, consulting services for ISO9000 acquisition and diagnostics for SMEs etc.

(4) Field and Object of Consulting

This center is good for technical consulting as ISO 9000 for quality improvement, introduction of CAD/CAM and guidance for information administration in the field of enterprise management. This center entrusts the job to outside specific consultants in the other specialized field.

The task of this center is connecting Science and Technology Commission and market (technological enterprise). Shenyang city government supplies SME promotion fund of 120 million RMB every year, and the center evaluates and guides for application of this fund. The center also conducts consultation for implementation of national SME promotion fund.

(5) SME Promotion Fund (SME technology and creation fund)

The productivity promotion center applied 196 projects for national technology and creation fund together with enterprises, and all these enterprises are scientific and technological small and medium enterprises. Among these, national science and technology commission approved 57 projects, the amount of approved money by national creation fund was 40.43 million RMB, and mean amount supplied to each enterprise is 700 thousand RMB. Besides, the evaluation standard is to clear the following three conditions presumably it is a SME having new technology.

1) Enterprise management level, 2) Technical level, 3) Financial level.

The enterprise satisfying these conditions are recommended by Shenyang city.

(6) Plan in the Future

It is considered that a half of existing 500 thousand small and medium enterprises in Shenyang could not survive after China associated to WTO. This center has a plan of active promotion of outsourcing consultation in order to support SMEs that could not grow sufficiently and are struggling now, because this center will not give sufficient services by only center's capability itself.

Therefore, the center conceived a plan of spreading outside experts network to abroad. In consulting field, the center hopes to service 'finance', 'specialty promotion of business' and 'business enlargement' for instance, because small enterprises desire such guidance of growing strategy.

(7) Request to the Investigation Team

This center considers the investigation team as the most powerful expert-supporting group from abroad, because the investigation team stays in Shenyang and surveys various field by individual expert. The team is expected that they will grasp the situation of SME in Shenyang considerably, and there are no foreign consultant for SME having such experiences.

Japan has the experience of promoting SMEs after the world war II . The center hopes seriously to learn its valuable experience and to publicize more to every one. As a part of this plan, the center wants to organize executives from several small and medium enterprises, and to train them in Japan paying actual expensive. Similarly, it wants to invite Japanese experts and to execute diagnosis for selected small and medium enterprises in Shenyang with charge.

5.2.16 Shenyang Technology Exchange Market

The scope of the Shenyang Technology Exchange Market occupies the third place in terms of the scale, next to Shanghai and Tianjin among the technology trading markets under the State Science and Technology Commission. Although each operational pattern of the technology trading is similar, the trading with overseas countries has not yet been conducted actively, comparing with Shanghai and Tianjin which are holding the technology negotiation fairs with Japan and U.S.A. every year.

The investment of the government fund in the Shenyang Technology Exchange Market is more active than in Shanghai, and the government performs the control and implementation of the incentives for the technology trading, the services to the enterprises etc. Moreover, the independent information network is organized among 100 members.

The Shenyang Technology Exchange Market has mainly the following 3 functions :

- Control office of the Shenyang Municipality Technology Exchange Market

It implements the policies and incentives for the exchange market of science and technology.

- Shenyang Municipality Technology Exchange Market

This is one of the state level technology trading markets located in Shanghai, Tianjin and Shenyang Municipalities.

- Shenyang Technology Corporation (40 members including those with MBA qualifications)

The Project Control Dept. : Which is involved in the construction of the network and internet with technological executives of 2,000 companies.

- The Market Regulation Dept. : Which controls the tax exemptions and incentives of the universities and laboratories and includes 100 member companies in Northeast District.
- The Exhibition and Trading Dep. : Which has 10 years of experience in the high-tech patent transactions and holds every year more or less 10 exhibitions and trading fairs in various places in Northeast District. As for the overseas trading, it has had experiences of holding the exhibition and transactions fairs in Korea and Germany so far, and has had interchanges with Shengzhen, Xinxin, Fujian Provinces, Taiwan etc.
- Commercial Service Project : The advertising equipment etc.
- Others : As for the technology transactions, annual record of RMB 1.6 billion has been attained. (1/4 of the East-North District or 1/4 of Liaoning Province) As for the new businesses, it is planning the transactions for the intellectual property right.

5.2.17 Federation of Industrial and Commercial (FIC) of Shenyang Municipality

The main purpose of The Industrial and Commercial Association is to promote and develop SMEs. However, in Shenyang Municipality, there are historically many big and heavy industries and SMEs have many problems. The Industrial and Commercial Association has been at present making an implementation plan for promoting SMEs and is expecting the support and advice from the Japanese mission of this time.

The main target of the services is non-public economy and as main constituent of this economy is private SMEs, its target is SMEs as well.

Meanwhile, the target of FIC is to give services to all economic entities (including public enterprises and foreign subsidiaries). FIC consists, besides the headquarters, of the sector associations, ward and district associations and regional associations which consist of such enterprises as have penetrated into Shenyang Municipality from different provinces. There are 5 presidents, 20 vice-presidents, 91 executive directors and 207 regular directors. The number

of the member enterprises are approximately 15,000, of which some 80 % are SMEs, 5 % are individual members (academics and dignitaries), 2-3 % are state enterprises and the reminders are foreign subsidiaries and stock enterprises. Some Chinese businessmen based in Japan are also included.

Association for the International Friendship Exchange was prepared the year before last and was started last year. 37 organizations and interchange associations have been organized mainly among the organizations of overseas Chinese. The problem of the organization is its strong bureaucracy and the future operational directions will have to be modified. For example, there is such an organization as the one called "External Communications Dept." but in foreign countries it could be called "International Business Dept.". It is considered that the reform of the internal structure is necessary.

The condition of the entry to the Federation is that incorporated enterprises and juridical persons who have cleared the membership screening procedure are eligible to join the FIC. According to the rules of the National Federation of Industrial and Commercial Associations (Beijing), all members of the Federation must pay the membership fee. However, the Federation does not collect the fees from the ordinary members at present. Since the private enterprises are forced to pay various expenditures, the intention is to make the burden less even a little. The membership fee is mainly collected from the president and vice-presidents of the enterprises (RMB 3,000), the executive directors of enterprises (RMB 2,000) and the regular directors of enterprises (RMB 1,000). The operational costs of the Federation, including the personnel, lighting, heating costs, etc. are covered by the government budget, membership fees, and income from some services for which fees are charged (approximately RMB 200,000 or slightly more per year). The internal organization of the Federation is as follows:

- Liaison Department
- Economy Department
- Membership Department
- Investigation Department
- Commercial Department
- General Office

The directly controlled organizations and structures are as follows:

The directly controlled organizations : Shenyang Chamber of Commerce for Electronics, Shenyang Illumination Business Company Limited, Shenyang Advertising Company Limited, Shenyang Flower City Beauty Parlor and Barber Training School

The directly controlled structures : Shenyang Chamber of Commerce International Friendship Exchange Association, Shenyang Municipality Enterprises Legal Right Protection Center, Shenyang Chamber of Commerce Overseas Exchange Center

The details of the services available to member enterprise:

- To propose the request from the members to the government through the Political Council (mentioned earlier)
- To reflect the requests from the members by appraising the various legal controls of the government and by taking part in the decision
- To give services in the negotiations with the government, banks etc. on the various problems arisen on the management level (on behalf of the enterprises, to negotiate with the government or banks)
- Education and Training (mainly for the managerial directors of the enterprises)
- The support for proceeding to the overseas (organizing the overseas observation tours, obtaining the certificates of origin etc.)
- Legal services (jointly with the No. 1 Legal Office) and the registration of the enterprises on their behalf, dispatching of the lawyers
- Recommendation of the model workers or others for the award

Note : Besides, the human education program is being promoted for the field of quality control, or management control as the joint project with German Chamber of Commerce and Industry.

The following description is for the directly controlled organizations and structures of the Federation.

As the relation with the IT business, there is Electronic Business Service Company under the control of the Federation. The purpose of the establishment is to intensify the support to the members from the economic aspect. It is intended to give support to adopt the Internet services by the enterprises. Not only to provide the information of the Internet but also to aim

at the commercial deals. It is also intended, in the near future, to give support to proceed to the international businesses through the Internet. As it started only less than 2 months ago, there is no substantial outcome. At this present stage, the web site for each member enterprise is being constructed. The actual expense is borne by the member enterprises. It will be listed on the stock exchange in 3-5 years. Besides this, as the service related to the SMEs, the Enterprise Legal Right Protection Center was established. This center shall play the role of adjusting the conflict of the interest between the state and private enterprises.

FIC has, for the sake of promoting the Science and Technology, established the Shenzhen Science and Technology Company Limited as a VC and jointly with the European and Asian Group, established Capital Credit Company Limited. The purpose of the establishment is to solve the credit matter between the individuals and private enterprises.

Like the Shanghai Capital Credit Limited Company, the police, the prosecution or the court are involved and the information is made public by utilizing the commercial, or government network, the information comprising the records concerning the court information, banks, consumptions, etc. or the record of the individuals in the company etc. Besides, it is planned to give the guarantee of the credit, counter-mortgage, re-guarantee etc.

5.2.18 Private Consulting Company

For the promotion of SMEs of Shenyang Municipality, the needs for the enterprise diagnosis, the management innovation, or the education of the manager are high and the importance of the government and private enterprise instructors or the consultants is significant. In Shenyang Municipality, however, such persons as have such ability and experience are not yet ready. The government offices are understaffed due to a large scaled administrative reform. The private enterprises have also little economic surplus to receive guidance by paying remuneration, which is particularly remarkable in SMEs.

It is considered that the big demand for the consultant business could be yielded in several years ahead. However, a sign for the growth can be seen in the private consultants emerged in these years.

(1) Government-related Consultants

1) Consulting companies related to the Economic and Trade Commission

Shenyang Tripod Commerce Company Limited (Meridian Consultants Limited)

Shenyang World Technology Enterprise Diagnosis Company

These 2 companies were established under the support of the Economic and Trade Commission and some common points can be noticed in that they receive support from DFID. Since Shenyang Tripod Commerce Company Limited has been already introduced in the section of SME Service Center, its explanation is omitted. Shenyang World Technology Enterprises Diagnosis Company started in 2000 and at present it holds 18 employees through recruiting. A member of Shenyang World Technology Enterprises Diagnosis Company took part in the diagnoses of the delegation. They are all public non-profit organizations.

2) The Science and Technology Commission Productivity Promotion Center

This is a public non-profit organization under Science and Technology Commission, which, for the purpose of providing loans to the enterprises involved in the high-tech, is conducting the diagnosis and guidance of the enterprises.

(2) Private Consultants

Big enterprise groups hold their consultants for their own enterprises or for their related enterprise and they expect to develop consultant firms who can receive contracts in the future from other enterprises than those of their groups.

1) Sheyang Dongyu Market Economy Research Institute (Dongyu Group)

Dongyu Enterprise Group Company Limited (Dongyu Group) occupies the 144th place in the Sales among the member companies of the National Industrial and Commercial Federation in 1999-2000. The scope of business comprises electricity, information, environment, refrigerating equipment, pharmaceuticals, real estate, and publishing. Each division takes the form of a limited company and, in addition, the group also holds an economic institute, bookshop and museum. The total number of the employees is 2,300, 10 % of which are from graduate schools and there are 30 doctors. The total amount of the asset of the year 2000 is RMB 1,853 million and the scale of the sales reaches RMB 936 million. The founder and the president of the company, graduated from the engineering department of Northeastern University, worked for the Liaoning Province Communication Science Institute. In 1985, when he was at the age of 29, he established the company with 4 university alumni with the capital of RMB 40,000 and started the business of developing computer systems and of the technical consulting services.

This company holds 20-30 directly controlled offices in and out of the country. In the section of information, which is one of its core business areas, it started

electronic mail business and their web site “one thousand and one night net” <http://www.1001n.com> has 500,000 accesses per day. They have obtained the certificates of ISO9000 series in the majority of their sections and are aiming at the maintenance as well as the upgrading of the quality.

Shenyang Dongyu Market Economy Research Institute is an economic research institute belonging to the Dongyu group and is such a market economy organization as focuses on the marketing. Although it is still new, the president and a few core staff members under him are aiming at securing the contracts for the projects inside and outside Dongyu group enterprises as well as the government related projects including market researches, creation of the management plans, feasibility studies of the government development project, etc. They are aiming at becoming the so-called “think-tank” for Dongyu group.

2) The consulting activity in the Golden Cup Automobile Company

This is the biggest enterprise in Shenyang Municipality and comprises several automobile-assembling enterprises. They have 11 automobile parts manufacturers under them and are educating and directing these manufacturers mainly in the enterprise diagnosis, the production control and/or quality control with the expectation of introducing foreign capital in future.

5.2.19 International Cooperation Organizations in Shenyang Municipality

(1) DFID

Among three activities of DFID (British Department for International Development), two activities related to consultation except SME Credit Guarantee Fund are as follows:

1) Support to SME through the establishment of SMEBAC (Shenyang SME Business Advisory Center)

The British government selected PWC (Price-Waterhouse & Coopers) as the consultant of the promoting organization, which is executing this project and the following ERA project with the cooperation from British Durham University.

This project is a three-year plan to develop private consultant firms in Shenyang Municipality that will support SMEs. In Shenyang Municipality, there has not been any such a consultant firm and so Tripod Consulting Limited Company and Shenyang World Technology Enterprise Diagnosis Company, that are subsidiary of

Shenyang Economic and Trade Commission, were selected as the development targets of DFID. In the beginning, SMEABC started consulting, not limiting the clients to SMEs.

2) ERA (Enterprise Restructuring Agency)

The program will implement the diagnosis and guidance for the restructuring of 50-targeted state owned enterprises in Liaoning and Sichuan Provinces.

First stage : two enterprises per one municipality; one year and six months;
Total seven enterprises are targeted.

Second stage : two enterprises per one municipality; one year six months;
Enterprises to be targeted are now under selection.

The way of the diagnosis and guidance is to focus on financial matters by visiting the enterprise twice a week.

As China has not yet reached the stage where enterprises pay the consulting fee to the consultants to receive the consultation, DFID is providing the following economic support :

Phase-1 : the first year - the amount of DFID subsidy	100 %
Phase-2 : the second year	70 %
Phase-3 : the third year	30 %
To be relinquished thereafter	

(2) The World Bank

The projects related to Shenyang Municipality are as follows :

1) International Bank for Reconstruction and Development

a) The project of restructuring the state owned enterprises

It was implemented at 242 enterprises of 4 municipalities (Wuhan, Shenyang, Shosha, Wufu) in 1999 and the official report was issued in 2001 by IFC. These four municipalities were selected as the models to develop the means to renovate state-owned enterprises throughout China.

The features of Wuhan and Shenyang are that they have large scale state owned enterprises and the features of Wufu is that they have many small enterprises. It

can be said that the understanding of the problems is comprehensive but as the investigation was conducted by IFC (The International Finance Corporation), the stress was put on financing and banking, so it can be remarked that the investigation on the technological aspect was not enough.

b) Structural reform project for the enterprises

- For three enterprises selected by the government in restructuring big and medium sized state-owned enterprises, the restructuring plan is to be proposed by inviting investment banks and consulting firms. This proposal includes the selling of the asset, joint venture, partial divestiture, etc.
- The improvement in the mechanism of selecting managers :
At present, the middle and top management are selected and dispatched by the government to the state owned enterprises, but the World Bank is going to propose such mechanism as the enterprise can choose, for which the World Bank considers to establish a human data base which can accommodate the registration of the personnel throughout the country. The structuring and the operation of the personnel data base is to be prepared by municipality and province, for which the World Bank is planning to implement the training in respect of such human resources control system to Chinese side by asking the World Bank Institute.
- The re-employment and training for the persons laid off :
The World Bank is considering to give advice for preparing the Data Base related to the job-seeking and the facilities related to the labor market of the municipalities.
- The support for SME development policy is under planning.

c) The industry renovation project in Shenyang Municipality

The four big enterprises, i.e. three machine tool enterprises and Shenyang Machine Co. were merged and established as Shenyang Machine Tool Limited Company. Total budget is US\$ 175 million. Now the renovation and restructuring have been completed and it is the largest NC machinery manufacturer in China.

d) International technology development collaboration project

- Mechanism of the modern management for 5-6 divisions of the municipality
- Labor, industrial rights & trade, safety

- To raise the level and provide support to those who wish to study abroad for Shenyang University
 - Establishment and support for the State-Owned Asset Control Bureau
 - Training of the staffers of the municipality government (Planning Committee)
- e) Environmental protection sub-projects
- Construction of five reclamation spots for the solid industrial waste of the municipality
 - Establishment of the environment protection training center and the education for raising the level of the staffers concerned
 - Information center : which summarizes, reports and publishes information from the environment division of the municipality
- f) Measuring station of the solid waste, which is rescinded after measuring.
- g) Waste water observation network of the municipality (The total budget is US\$ 10,400,000.)
- h) Control of the project fund

As for the collection of the fund, the Government provides the information on the priority industrial development plan at the presentation meeting of People's Assembly. Enterprises submit requests from through the Item Proposal Station after studying by themselves. Big projects are controlled by the technology renovation stations, meanwhile the medium and small projects are controlled by the relevant departments concerned.

5.3 SME Policies in Shenyang

5.3.1 Policies Relating to Promotion of SMEs in Shenyang

The SME promotion policies in Shenyang are currently being examined in accordance with the "Some Opinions on Policies Regarding Support and Promotion of the Development of SMEs" put forward by the SETC. The Study Team obtained the following documents on privatization and industrial policies relating to SMEs and the "Report of the Study on Measures to Develop SMEs in Shenyang" compiled in October 2000 and has used them as reference materials to examine the policies in question.

- (1) Liaoning Provincial Committee of the Communist Party of China: "Notification Regarding Reform Plan of Party and Government Organizations in Shenyang"

Municipality by the People's Government of Liaoning Province", Official Document of the Liaoning Provincial Committee of the Communist Party of China No. 25 of 1995 (the Shenyang Municipal Planning Commission was dissolved and the Shenyang Municipal Economic and Trade Commission was established in May, 1995)

(2) Shenyang Municipal Committee of the Communist Party of China, Shenyang Municipal Government: "Decision to Encourage the Development of Private Sector Economy"

(3) "Industrial Adjustment Program" of the 10th Five Year Shenyang Municipal Development Plan

Even though this plan is still at the preparatory stage, a draft document was provided in response to a request made by the Study Team by the Technology Innovation Office of the SMETC which is responsible for the formulation of the program in question. The Study Team was told that an industrial adjustment program would be important for the preparation of useful recommendations for the promotion of SMEs.

(4) Report for the Study on Measures to Develop SMEs in Shenyang dated 30th October, 2000 and prepared by Mr. Ma and Mr. Zhai, etc.

The main policies (measures) are outlined in 5.3.2 through 5.3.5.

5.3.2 Study on Measures to Develop SMEs in Shenyang

While measures to develop SMEs in Shenyang are currently at the examination stage, the SMETC prepared a report in October 2000 as a study material in which the following policy recommendations are made.

(1) Active guidance should be provided for SMEs to develop in a new direction from the viewpoints of specialization, excellent products and uniqueness, mainly focusing on industrial restructuring and adjustment and advancement of the industrial standard.

1) Groups of SMEs characterized by areas of specialization should be fostered.

2) Groups of SMEs characterized by overseas-oriented business activities should be fostered by means of inward investment in the Shenyang area. Many of the world's advanced countries have emphasized supporting activities for the development of SMEs and have accumulated vast experience of success and appropriate methods. The SMETC should accelerate the growth of local SMEs to the level of international

enterprises and should introduce the experiences of success and appropriate methods of advanced countries through the active use of the State Enterprises Reform Project of the World Bank and the Study for the SME Promotion Project (both of which are financial assistance projects) in view of the proper establishment of appropriate policies and service systems.

(2) The existing business introduction mechanisms and organization and coordination functions of sector-specific associations throughout the city should be utilized to provide omni-directional services for SMEs in the city.

1) District (city) and ward level SME credit guarantee funds should be established through appropriate guidance for the district (city) and ward authorities to create a credible credit service system.

2) Various types of manpower introduction centers should be established in each district (city) or ward of Shenyang.

3) A technical service system should be created. At the same time, competent research institutes and priority sectors should be selected to create experimental bases for the development of products suitable for SMEs.

4) An information service system should be established. Using the networking infrastructure of the Information Center of the SMETC, a SME information network should be created to store an elementary company databank, product databank, databank of scientific and technological development results, equipment trade databank and databank on projects designed to attract inward investment, etc. Japanese experts should pay strong attention to this type of project and the financial assistance of Japan is anticipated.

(3) Real Work must be conducted to Further Promote the Development of SMEs.

1) A thorough survey on SMEs should be conducted. While support for SMEs is a new function of the administration, the basic work to facilitate this support is still insufficient. The work targets are not clearly defined and the lack of basic data is the largest hurdle for the smooth implementation of work to support SMEs. Strong determination is required to conduct a survey on SMEs in the city. In fact, based on the opportunity provided by the decision by the provincial government to conduct a survey on SMEs throughout the province, the municipal government is currently preparing to conduct its own survey and the necessary arrangements are being made

with the Bureau of Statistics, the Bureau of Industry and Commerce and other related sections. The subjects of the planned statistical survey are all SMEs in the city and the starting point for statistical data is set at 31st December 2000. The completion of the survey is planned in April 2001. Based on the findings of this survey, data to control SMEs in Shenyang will be compiled to form a firm basis for the full-scale assessment and control of SMEs.

- 2) Training for SME managers is required. The planned courses should cover such fields as finance, computers and marketing, etc.
- 3) A priority support system should be established. One ward, one industrial park, one group and one set of enterprises will be selected in 2001 for priority support. A model enterprise will be selected. This ward will be given priority support by means of establishing a SME service system in the form of a ward-class SME credit guarantee fund, etc. A model industrial park will be selected and priority support will be provided in terms of information, policy and finance. A model group enterprise will be selected and priority support will be provided in terms of the restructuring of assets, management mechanism and group rationalization. The planned set of enterprises will consist of small and medium size automobile parts manufacturers and support will be provided in the form of a credit guarantee to facilitate the creation of an automobile parts manufacturing base.

5.3.3 Privatization Policies (Decision to Encourage Development of Private Sector Economy by Shenyang Municipal Government)

Although this decision is about privatization policies, it also forms the basis for SME promotion policies.

Principles

- 1) Full recognition of the significance of promoting the private sector economy: adjustment of the economic structure; reform of state enterprises; change of government functions; promotion of the local economy
- 2) Clarification of the guidance principles and development targets for promotion of the private sector economy: fresh development of private enterprises to facilitate the process towards larger scale, industrial specialization and grouping by accelerating the change of the system for collective enterprises

Targets for Private Enterprises by 2002

- 1) Turnover: RMB 70 billion (half of the municipal industrial output)
- 2) Conversion of at least 80 % (or 100 enterprises) of collective enterprises in urban and rural areas to stock companies or joint stock companies
- 3) Conversion of small and medium size state enterprises with an annual turnover of RMB 100 million or larger to private enterprises
- 4) Creation of at least 10 private enterprises with an annual turnover of RMB 1 billion
- 5) Creation of at least half a million jobs
- 6) Ratio of employees of private enterprises: at least 70% of the total number of employees in the city

Main Policies

(1) Full Achievement of Main Tasks for Promotion of Private Sector Economy

1) Promotion of Establishment of One Man Businesses and Private Enterprises

- Establishment of new private enterprises by officials and engineers of public organizations
- Establishment of sole ownership businesses or private enterprises or the finding of employment at private enterprises by those laid off
- Creation of large wholesale markets and production goods market
- Improvement of the level of traditional tertiary industries through the entry of one man businesses and private enterprises
- Encouragement of high-tech and export-oriented industries through the fostering of businesses related to scientific and technological development, education, tourism, telecommunications, information, consulting and accounting, etc.
- Encouragement of investment in primary industries

2) Urgent Conversion of Collective Enterprises to Private Enterprises through Change of Assets Ownership System

- Urgent conversion of SMEs, the sale of which is impossible or inappropriate, to joint stock companies by clear evaluation of their assets and ownership of industrial rights

- Participation of one man businesses and private enterprises in the processing of the change of status of state enterprises to corporations and the restructuring of assets
 - Encouragement of the possession of stock of large state enterprises by private enterprises or possession of the majority of the stock of smaller state enterprises by private enterprises
 - Once the conditions are ripe, private enterprises should achieve the increased production of state enterprises through capital management and low cost by means of the outright purchase, joint ventures with, leasing or entrusted management of these state enterprises.
- 3) Development of Collective Economy by Priority Fostering of Leading Private Enterprises
- Placing of the emphasis of existing groups of private enterprises on improved market competitiveness and business growth to play the role of leading smaller enterprises by means of the merger of assets and products, joint management and others.
 - Integration of excellent enterprises, leading products, R & D, production and trade, etc. s to create groups of private enterprises with a large market share.
- 4) Increased Share of Private Enterprises through Adjustment of Product Structure
- Introduction of advanced technologies to develop high-tech and highly value-added products and to establish brand images of private enterprises
 - Improvement of the product quality to meet the needs of the domestic and foreign markets and to improve brand images
 - Promotion of the development of private enterprises in high-tech industries to develop new products, to expand the scope of processed products and to increase the production of patented products, traditional products, export products and import-substitution products
- 5) Strengthening of Internal Management of Enterprises
- Strengthening of the internal management of enterprises to improve the management standard and to increase profits
 - Introduction of a modern management system at some large private enterprises in response to the market competition and demand for business growth

(2) Further Introduction of Policies to Promote Private Sector Economy

1) Encouragement of Establishment of Private Enterprises

- Exemption of private enterprises in rural areas which provide support for all stages of agricultural production from the corporate income tax
- Exemption of newly established self-financing consultancy firms, information enterprises and technical service companies from the corporate income tax for the first two years of operation
- Exemption of newly established self-financing private enterprises in the transportation and telecommunications sectors from the corporate income tax for the first year of operation and a 50 % reduction of the same income tax for the second year
- Exemption of newly established self-financing private enterprises in such business fields as public works, commerce, imports/exports, tourism, warehousing, household services, restaurants, education, cultural services and public hygiene from the corporate business tax or a reduction of the said tax for the first year of operation if approved by the Tax Office
- Exemption of sole ownership businesses established by those laid off from tax for one year provided that they supply a certificate of preferential treatment issued by the Labor Bureau
- Exemption of the remodeling projects of private enterprises which are approved by the related administrative bodies and which are also approved for the zero taxation rate by the local tax office and municipal audit office for fixed assets investment from the fixed assets tax and the investment adjustment tax.
- Exemption of private enterprises of which more than 60 % of the employees are those laid off by the state or collective enterprises acquired by them from the corporate income tax for three years if approved by the tax authority
- Reduction of the corporate income tax by 50 % for a further two years for the above private enterprises if more than 30 % of the employees are those formerly laid off or made unemployed in the city at the end of the above exemption period

2) Simplification of Approval Procedure and Relaxation of Approval Conditions for Establishment of Private Enterprises

- Excepting special types of businesses stipulated by state laws or regulations, a private enterprise may directly register with the relevant competent office.

Applications for the relevant permits and the authorization procedure for specific business activities may be completed after registration.

- Cancellation of all procedures for the granting of permits and authorization for specific business activities which are not clearly set forth by laws or regulations
- Implementation of only the necessary procedures pursuant to the rules of the competent office in the case of special types of businesses where pre-examination is necessary prior to corporate registration

3) Encouragement of Development of Private High-Tech Enterprises

- Approval of investment by state enterprises or their subsidiaries of up to 30 % of the income resulting from technological development in private high-tech enterprises
- Following the evaluation and certification of the technological development results, approval of investment of up to 20 % of the registered capital of a high-tech enterprise
- Raising of the above ceiling to up to 35 % in the case of a new technology being accepted by a high-tech enterprise
- Provision of loans for science and technology-based private enterprises using patents or intellectual property (for example, trade marks) as collateral
- Affording of the same treatment as that for state-run science and technology research institutes to science and technology-based private enterprises in the case of applications for approval of science/technology research projects to be supervised by a government ministry, approval of a high-tech industry or the protection of industrial property
- Encouragement of the participation of private enterprises in tenders for technological development projects or projects involving the trial production of new products of the city or a higher level
- Disbursement of the funds required for R & D by science and technology-based private enterprises from the Science and Technology Fund by the Municipal Science and Technology Committee and the municipal finance department

4) Encouragement for State Enterprises Engaged in Distribution of Industrial Rights to Participate in Reform, Purchase, Merger and Leasing of State Enterprises

- Preferential treatment in terms of price under the relevant policy for the purchase of the industrial rights of a state enterprise in a lump sum by a private enterprise

- In the case where the purchase price is too large for a lump sum payment, possibility of payment by installments
 - Refund by the Treasury of the corporate income tax paid by a private enterprise which has leased, has been entrusted to manage or has merged with a loss-making state enterprise for two years from the year of producing a profit if the said state enterprise becomes a profit-making business within three years
- 5) Further Industrial Liberalization of Sectors Where Liquidation or Management of Private Enterprises is Permitted with Approval of State Council
- Encouragement of the entry of enterprises in the real estate sector and the property management sector
 - Encouragement of the entrustment of property management to private enterprises by real estate dealers
 - Promotion of investment by one man businesses and private enterprises of which the conditions are appropriate in such sectors as energy, transport, urban development and water utilization, etc.
 - Introduction of one man businesses and private enterprises in the field of the development and management of real estate
 - Allowing of sole ownership businesses in special business sectors with the permission of the competent authority for each sector
 - Allowing of school management and development of educational facilities by individuals or private enterprises in accordance with the state regulations
- 6) Financial Support
- Response by state-owned commercial banks, city banks and rural cooperative banks to the rational fund raising demands of private enterprises
 - Provision of direct finance and the issue of debentures by private enterprises which have played an important role in the adjustment of the industrial structure in Shenyang and of which the conditions for investment in scientific and technological development are deemed to be appropriate as in the case of state enterprises
 - Payment by draft in the case of private enterprises of which the credit grade is AAA or higher and of which the ratio of liabilities to assets is 50 % or less

7) Personnel Support

- Exemption from the training cost payable to a school when a private enterprise employs a new school leaver
- Eligibility of engineers working for private enterprises to sit technical qualification examinations as in the case of engineers working for state enterprises
- Forwarding of the years of work at a private enterprise in the case of the recruitment of an employee of a private enterprise by a state enterprise or government organization
- Application of the personnel recruitment conditions equivalent to those applicable to state enterprises when an engineer is recruited from abroad or from another city
- Permitted change of the family register from the rural register to the non-rural or urban register for a spouse and children in the case of a manager or engineer who is certified as having made a special contribution by the relevant administrative section
- Affording of citizen status to investors and their spouses from other cities when such investors make investment above a certain size in Shenyang
- Maintenance of the employment status for three years when employees of government organizations become executives or owners of private enterprises
- Eligibility of government officials to sit the examination for a specialist engineer when temporarily posted to private organizations

8) Encouragement of Creation of Various Markets

- Application of preferential measures in terms of land price, eligibility for application and collection of the fee for the examination process, etc. for the creation of markets authorized by the municipal government
- Provision of the land required by a private enterprise through the transfer of such land at cost or land use rights when a personal business owner or an enterprise receiving preferential taxation invest in the creation of a market

9) Promotion of Export-Oriented Enterprises

- Application for an import and export business by the external trade section on behalf of enterprises in accordance with the country's relevant criteria which are applicable to state enterprises

- Promotion of joint ventures with foreign subsidiaries and the overseas operation of private enterprises
- Provision of procedural conveniences for private enterprises for overseas business visits, participation in trade fairs and development of overseas trading

(3) Protection of Legal Rights of Private Sector

- Reduction of the financial burden on private enterprises by means of the rearrangement of the compulsory fee collection levels set forth by state and local laws and regulations regarding the economic activities of the private sector
- Immediate suspension of those fee collection items which are not clearly set forth by laws or regulations to rectify fee collection above the legal levels
- Withdrawal of unnecessary inspections by the authorities so that business owners can concentrate on production and management
- Establishment of a communication system between the competent authority and private enterprises to hear the opinions and requests of the latter

(4) Promotion of Healthy Development of Private Enterprises

- Change of the principal control method for private enterprises by government bodies from that for a planned economy to that for a market economy, i.e. introduction of market principles, fair competition, legitimate management and fair taxation to the management of private enterprises
- Establishment of healthy management, financial and statistical systems based on state laws concerning quality control, safe production, environmental protection, employment and social security, etc. to put in place a modern business system for the running of private enterprises

(5) Support for Promotion of Private Sector Economy through Public Relations Activities

- Publicity of the theories and policies regarding the promotion of the private sector economy by PR sections at an administrative level by means of mass production to fully explain the roles of the private sector economy for the development of the entire economy of Shenyang
- Promotion of the understanding of the importance of the private sector economy among related persons by means of publicity on model enterprises

(6) Intensified Guidance for Promotion of Private Sector Economy

- Provision of guidance by the municipal government and government organizations at all levels on the development of the private sector economy to coordinate the economic activities of the private sector
- Establishment of the Private Sector Development Promotion Committee in Shenyang as a permanent body (already conducted)
- Establishment of an appropriate guidance system by the ward and district authorities
- Full involvement of academic societies and industrial associations, etc. in the promotion of the private sector economy, acting as business introduction and Liasoning channels

5.3.4 Industrial Adjustment Program of 10th Five Year Shenyang Municipal Development Plan

Although this program is primarily intended to serve large enterprises, it is also closely related to SMEs. As is well-known, Shenyang was formerly a major industrial base established by the central government, producing wide-ranging products. Its industrial advantages, however, have been lost due to the shift to a market economy. A number of surveys were conducted on local industries, products and enterprises under the 8th and 9th Plans and many problems were identified.

Under the 1995 Plan, the advantageous position of the automobile, machine, electronics, pharmaceutical and chemical industries improved and the market share also improved with an increase of the number of brand products. The measures implemented so far include those described below.

(1) Grouping

- 18 groups of state corporations
- 12 groups of private enterprises

All of these groups are showing rapid development. The development of large groups of enterprises have favored the development of parts industries.

(2) Change of Business Ownership

The ratio of state capital has declined with the major growth of private enterprises (many of which are SMEs). Nevertheless, the following problems still exist.

State enterprises are still operating in all nine sectors with an average market share of 60 %. This situation is disadvantageous from the viewpoint of adjustment of the industrial structure.

(3) New Advanced Technologies

There are not many products which enjoy international competitiveness based on advanced technologies and/or high added value. A follow-up survey conducted by the municipal government has found that the ratio of high-tech and/or high value added products is less than 10 %, hampering economic development in Shenyang.

(4) Division

The solving of these problems is intended in the 2005 Plan. The analysis results of various problems at home and abroad and the possible impacts of China's membership in the WTO on the national and local economies suggest that it is desirable for China to aim at knowledge-based economic development. Urbanization is taking place in all-rural areas in China and the future prospects can only be accurately assessed by studying the past historical trends. In other words, the status of such old industrial cities as Shenyang must be properly studied.

(5) Clarification of Status of Key Industrial Cities

It is believed that machine manufacturing is currently advantageous for Shenyang.

(6) General Targets

- Analysis of the production output (value) and rate of increase as a result of industrial development
- Sector specific survey: types of enterprises, internal structure of enterprises types of ownership

Based on the above analysis and survey, a five-year program featuring the planned increase of the production value, products and composition of enterprises, etc. has been prepared with qualitative as well as quantitative targets.

(7) Principal Contents of 10th Five- Year Plan

- 1) First Pillar : Advancement of those sectors which have traditionally enjoyed advantages

2) Second Pillar: Commercialization of the research achievements regarding new advanced technologies

- Five advantageous sectors
Automobiles; machinery; electronics; pharmaceuticals; chemicals
- Use of various methods to promote these sectors
① technological innovation; ②, capital injection; ③ direct investment by foreign capitals
- Improvement of the technological strength of these five sectors to further strengthen these sectors. Increase of the total production value of these sectors to increase the ratio of enterprises with an annual turnover of RMB 5 million or more from the current 60 % to 70 % in five years.
- Environmental protection equipment; intelligent devices; NC machine tools; industrial robots; digitalized medical equipment; new materials; new gas combustion systems; low temperature nuclear heat supply equipment; monorail and other urban transport systems. Based on a thorough study, promising technologies relating to the above equipment/systems will be further developed.

3) Third Pillar: Specialization

a) Creation of Specialist Centers

These business fields have not been specialized in China and the operating rate and work efficiency are both low. A foreign consultant has been employed to conduct a study with a view to establishing 4 – 5 centers. It is hoped that the advantages of SMEs will be exploited to develop these businesses and Japanese advice will be actively sought because of the successful examples in Japan.

b) Strengthening of Product Development and Marketing Capabilities of Enterprises

As illustrated below, enterprises in Shenyang are weak in terms of R & D and marketing which are the two end stages of the three essential activities of enterprises.

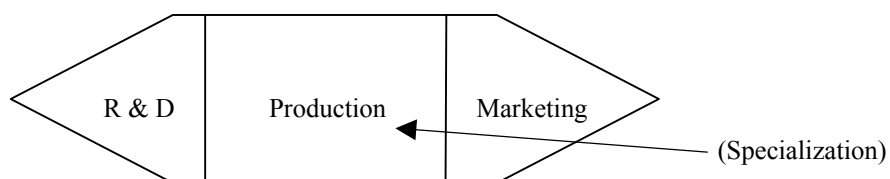


Fig. 5-3-1 A Problem of Production System

In contrast, the world's leading manufacturers are strong in the R & D and marketing aspects and the production stage has become virtual production (virtual plant).

The municipal government understood the importance of specialization when the 8th 5 year Plan was prepared but has been unable to address the issue. This specialization should be pursued in the 10th 5 year Plan although its achievement may be difficult. While the idea is to start with the machine industry, the municipal government lacks confidence and is hoping for appropriate guidance by the Study Team.

There is a will to liberalize those business fields with suitable competitiveness. To be more precise, ineffective state-owned enterprises should be withdrawn and private enterprises should be encouraged. State-owned enterprises will remain in those fields which are essential for the national economy. The municipal government should not waste its resources on unnecessary matters and should leave the principles of a market economy to operate. As there are many loss-making enterprises, those wasting resources should be either liquidated or converted to other businesses. There is a shortage of human resources in the areas of management and R & D. While the budget scale for the 10th 5 year Plan has not yet been decided, the plan will have the following three components:

- Construction: roads, bridges and hotels, etc.
- Reform of industrial structure: to be controlled by the SMETC
- Real estate: to be controlled by the Planning Committee

RMB 20 billion is allocated to the reform of the industrial structure in the 9th 5 year Plan and the budget size of the 10th 5 year Plan is expected to exceed this figure. The RMB 20 billion in the 9th 5 year Plan has been allocated in the following manner.

- Equipment investment: 70 %
- Technology introduction plant improvement and infrastructure improvement: 30 %

In the 7th 5 year Plan and the 8th 5 year Plan, the municipal government decided to inject money based on the plan. Since the 9th 5 year Plan, however, financial

institutions provide financial assistance based on the priority policies of the municipal government instead of direct funding.

5.3.5 Directives on Shenyang Municipal Technology Renovation Service Center for Enterprises

In February and March 2001, the municipal government summoned 100 excellent SMEs to request their cooperation, explaining the above-mentioned subject.

Shenyang Municipal Technology Renovation Service Center for Enterprises was established, based on the document : State Economy, Trade and Technology [2000] No. 671 and the directive contained in the Liao Economy, Trade and Science [2000] No. 129, stating, “To establish the system of technology renovation services for enterprises as soon as possible, aiming at the unification after the most optimum distribution and arrangement of scientific and technological resources of the society”.

“Service Center” is a non-profit organization for preparing favorable external environment for the development of SMEs in Shenyang Municipality, focusing further on the technology renovation at enterprises, promote combination of scientific technology and economy, accelerate the efforts to convert the accomplishments of the scientific and technological researches into the actual production ability, and provide various kinds of services for the technology renovation at SMEs, under the leadership of Shenyang Municipal Economic and Trade Commission.

“Service Center” is, at the same time, a tie and bridge for the government to provide guidance, communication and promotion to SMEs for technology renovation, as well as a service station for accelerating the efforts to convert the accomplishments of the scientific and technological researches into the actual production ability. Its principal tasks are as follows :

(1) Information Service

To provide information service to the information networks and enterprises on matters such as the state policies and regulations, direction of industry development, the routes for investing and financing, the accomplishment of the science and technology, needs for the technology, the management of the enterprises, marketing, human resources, and to support the market forecasting by the enterprises and the improvement of the quick responding ability and the improvement of the controlling level.

(2) Development and Diffusion of Technologies

To transfer, diffuse to enterprises, and promote the technologies with future marketability, high technological level, high added value, high linkage to industries and remarkable economic and social effects, using systematically and effectively various kinds of social resources in combination with the adjustment of industrial structure, assisting SMEs in conducting research and development of new technologies and new products, develop activities for diffusing new technologies by multiple methods, and propagating and diffusing advanced, matured and appropriate technologies.

(3) Services for Transaction of New Technologies

To provide through the market for transaction of new technologies, services for the policy consulting in the process of the transaction, the agency for patent, registration of the contract, approval of transaction contracts and modification of the intellectual asset registration, etc., and to form a system for highly efficient and favorably creditable new technology transaction services.

(4) Financial Services

To provide the services for the SME's technology renovation, introducing many possible routes of raising fund.

(5) To systematize the renovation policies, special technology consulting and training, other specialized services, etc.

(6) To Complete the Consignment Work from the Government and Other Organizations.

To invite 20 experts from the Shenyang Branch Office of Chinese Academy of Science, State Level Enterprise Technology Center and Sector, establish the committee of experts for technology renovation at enterprises, and provide various kinds of services such as enterprise diagnosis, technology consulting, solution of difficult problems, development of new products and test manufacturing, on the basis of the principle of assisting small enterprises with scientific technologies and efforts on the part of large enterprises, for the purpose of raising the level of the products and promoting the relay from the old generation to the new one by the efforts of Shenyang Municipality in accelerating the steps of renovating the traditional industry, making use of high technology.

At the same time, the municipal government established a consulting service by the telephone for technology renovation to solve the problem that the implementation of such service is difficult, as SMEs are large in number and scattered over a wide range.

5.3.6 Comments on the Intensification of Efforts to Construct the SME Technology Renovation Service System

These comments issued by the State Economic and Trade Commission in July 2000, provided the basis for the directions of the Shenyang Municipality Government.

Establishment of the technology renovation service system for SME is a very important measure to accomplish and steadily implement the spirit of “the decision of the Center of the Communist Party on some important matters in relation to the renovation and development of the state-owned enterprises” and “the decision of the Center of the Communist Party and the Cabinet Office in relation to the reinforcement of technology renovation, development of high level science and technologies and materialization of industrialization”, to adapt to the big trend of the world industrial structure adjustment and to the rapid change in the environment of market competition, to accelerate the progress in the technology and enhancement of the industry, and to form the system of the technology renovation which is mainly implemented by the enterprises. In order to help assure the success of this project, the following comments are presented :

(1) Guidance Philosophy and Targets

On the bases of the aggregate requirement for the enterprise renovation and development, and the technology renovation of China, the construction and development of the technology renovation service system for SMEs should be accelerated ; the external sound environment should be composed for the development of SMEs ; the work for the technology renovation of the enterprise should be toiled harder ; combination of the science and technology with economy should be promoted; and conversion of the accomplishment of science and technology to the actual productivity should be expedited.

State Economic and Trade Commission in individual places should, on the basis of the actual circumstances of the relevant enterprises, not construct new facilities, strictly maintain the policy not to establish the duplicating organizations, promote the transfer to the social public organization of the existing technology renovation intervention organizations (new technology diffusion organization etc.) through optimizing the distribution of, sorting out, and then combining the social science and technology resources, to provide various services for the technology renovation of SMEs.

Starting from the year 2000, implementation in two years is targeted to establish around 40 SME technology renovation service centers mainly for SMEs in the directly

controlled municipalities, the capital of provinces etc. and the open network of the technology renovation service system for the entire society should be gradually formed.

(2) Main Duty of the Technology Renovation Service Centers

The technology renovation service center is the core of the SME Technology renovation service system ; occupies the important portion in the technology renovation system ; is the tie and bridge for State Economic and Trade Commission in every location to give guidance to, communicate with and promote the SME technology renovation ; is the service station to accelerate the transfer of the accomplishment of the science and technology to the actual production ability. Its main duties are as follows :

1) Information service

Through the information network and various media, the information services such as the state policies and regulations, tendency of development of the sectors, the route for investing and financing, the accomplishment of the science and technology, needs for the technology, the management of the enterprises, marketing, human resources, are to be provided to the enterprises; and prospect of the market by the enterprises and the improvement of the quick responding ability and the improvement of the controlling level are to be supported.

2) Technology development and its diffusion

By combining with the structure adjustment of the industry, the effective and systematic utilization of various social resources, assistance for research and development by the enterprises of new technology and new products, development of the diffusive action of the new technology through various means, propagation and diffusion of the progressive should be promoted, and matured, appropriate, commercially viable, technically advanced technologies capable of adding high value, highly linked to industry and remarkably effective economically as well as socially, should be promoted to be transferred and diffused to the enterprises.

3) Services for transaction of new technologies

Through the market for transaction of new technologies, services for the policy consulting in the process of the transaction, the agency for patent, registration of the contract, approval of transaction contracts and modification of the registration of the intellectual asset, etc. should be provided, and a system for highly efficient and favorably creditable new technology transaction services should be formed.

4) Financial services

For the SME technology renovation, the services should be provided, introducing many possible routes of raising fund.

5) Systematization of the renovation policies, special technology consulting and training and other specialized services, etc.

6) Completion of the consignment work from the government and other organizations

(3) Short-term Main Businesses

From the year 2000 onward, local Economic and Trade Commissions should, under the unified arrangement of the State Economic Trade Committee, construct the SME technology renovation service organizations in accordance with the actual circumstances of the relevant localities.

The directly controlled municipalities should, by making full use of the advantage in the existing science and technology, education, personnel, base of the industry, information, etc., construct technology renovation centers which have powerful serviceable functions and big diffusive effect in the relevant areas, provide the technology renovation services not only for SMEs but also for the large enterprises, pull out the plane by the point and perform the function of giving guidance to other municipalities.

The capital of each province should exhibit the diffusive effect with harder efforts to the other localities and prevent the duplicating construction in mutual cooperation with the technology renovation centers, diffusion organizations, etc., belonging to existing entire provinces and the planned single-row cities within the province (Note: This city is provided with the economic controlling right, external trade autonomous right, etc. which is placed on the same level as the province.).

Technology renovation model municipalities and the associated municipalities should closely combine the technology renovation services and the modeling work and should, under the unified arrangement for the construction of the relevant provincial technology renovation service system, make their own advantages clear and build up the service system of the various different levels.

The local Economic and Trade Commission should intensify the direction and the support to the technology renovation service organizations, examine and decide the related measures and the control methods, based upon the principles of the market

demand, standardize and intensify the service mind to the technology renovation service organizations, up-grade the quality of the service and strengthen the competitiveness. By forming the conditions, it should induce to participate in the technology renovation intervention services of the various social science and technology resources and should fully exhibit the function of the universities, research organization and emphasize enterprise technology center. By establishing the assessment system and based upon the quality of the work, contents of the services, scope of the clients, effect of the operation performances, etc., it should perform the periodical assessment, summarize the results quickly and transfer the experience of the work.

5.3.7 Comments for the SME Promotion Plan by the Shenyang Municipality Science and Technology Commission

(1) Development of the Small Enterprise to be regarded as Highly Important

In order to accelerate the progress of high-tech industry in Shenyang, to expedite the reform of the obsolete industrial base and to promote the economy of the Shenyang Municipality, State Ministry of Science and Technology and the Science and Technology Commission of Shenyang Municipality regard this investigation to be important and Ministry of Science and Technology has further decided the specialized work role of the Productivity Promotion Center of the Science and Technology Commission, the director in charge of Municipality Science and Technology Commission takes exclusively its responsibility and consigns it to the Productivity Promotion Center and the Productivity Promotion Center nominates the person in charge who communicates with the delegation and the Ministry of Science and Technology should further set up the SME diagnosis and training team covering all the country in Shenyang Municipality. Shenyang Science and Technology Commission is assigned a specially important position in the budget investing system of the technology renovation and scientific technology, and by giving a heavy support to SMEs which hold irreplaceable functions in the development of the national economy and in order to promote the technological progress of SMEs and in order to enhance the technology renovation ability of SMEs and further contribute to raising the level of national productivity, it plays an important role. Shenyang Municipality SME Promotion Plan has an important meaning for expediting progress, enhancing the market competitiveness and developing the technology renovation of SMEs.

SMEs occupy an important structural portion in the progress of national economy, and Shenyang Municipality has, in accordance with the proposal of the State Ministry of Science and Technology, established the Productivity Promotion Center, guided and

organized for the scientific and technological power to participate in the main battle field of national economy, promoted the industrialization of the accomplishments of the high-tech, promoted the progress of the technology of the enterprises (especially SMEs and township-village enterprises), provided the technical support to SMEs and township-village enterprises, conducted the technical diagnosis of the enterprises, provided various information services, organized the training activity of the specialized technology and has completed the specialized control mechanism for the progress of SMEs.

(2) Policies and measures for Accelerating the Progress of SMEs, prepared by Shenyang Municipality Science and Technology Commission

Policies of the support

- 1) “Some comments concerning the progress and promotion of the private scientific and technological enterprises”
- 2) “The comments on strengthening the protection of the patent held by high-tech industries in Shenyang Municipality”
- 3) “As to the provisional regulations for the technology renovation of the scientific and technological type SMEs”
- 4) “The implementing plan of the technology renovation fund project for the scientific and technological type SMEs”
- 5) “Some comments on the reinforcement of the diffusion and application of the CAD technology for SMEs”
- 6) “Methods for the accreditation and the taxation control for high-tech enterprises in Shenyang Municipality”
- 7) “Some comments concerning further promotion in combining the science and technology with the financing in Shenyang Municipality”

(3) Ratio of the Application by SMEs for the Support in the Field of the Projects

Shenyang Municipality Science and Technology Commission has established various planning projects, for example, “Torch project” (Note: the science and technology development plan), break-through plan for difficult problems, new product plan, the social development plan, fund plan, the spark plan (Note: the science and technology plan for expediting the progress of the local economy), accomplishment diffusion plan, software science plan, etc., out of which applications from SMEs occupy more than 30 %

of the aggregate plan with their budget of RMB 14 million and the control of the plan is not restricted by the scale and the nature of the enterprise.

(4) Support to SMEs in the Area of Fund Raising

Shenyang Municipality has established the Science Planning Project, the Fund for the Loan Guarantee for the Private Science and Technology, the Venture Fund for the Private Science and Technology Development, the Seeds Fund, the SME Renovation Fund, etc. and makes them as the project funds to exclusively support SME and the high-tech enterprises, of which the Science Planning Project occupies more or less 20 %, Venture Fund RMB 8 million, SMEs 70 %, Seeds Fund RMB 5 million, total amount of which is utilized for SMEs, Private Fund RMB 2 million every year, total amount of which is used for the private enterprises, SME Renovation Fund total RMB 20,760 million for 29 items in 2000 and RMB 40 million or so used every year for the support of enterprises and loan from the Torch Bank RMB 55,180 million, totally used for SMEs.

(5) Introduction of the Personnel and the Matching of the Technical Service and the Science and Technology

Shenyang Municipality Science and Technology Commission has actively introduced the personnel, absorbed high-level specialists of various fields, joined the Productivity Promotion Center, endeavored to raise its own level and ability, provided the enterprises with all directional services, and improved the quality guarantee. By providing such services as the diagnosis, consulting etc., built the bridge with enterprises, conducted matching of the science and technology and with financing firms for the enterprises, etc. The number of the matching in the year 2000 totaled 36.

(6) Establishment of the Servicing Organizations

In order for Shenyang Municipality Science and Technology Commission to provide further better services to SMEs and strengthen the focal points of services, the Commission has established Shenyang Municipality Production Work Promotion Service Center, which is the specialized servicing organization, and other similar institutions such as Shenyang Municipality Venture Business Development Center, Shenyang Municipality Private Science and Technology Development Center, Shenyang Municipality High-Tech Renovation Inauguration Center, Shenyang Municipality Torch Bank Shenyang Municipality Patent Business Service Center, Shenyang Municipality Science and Technology Information Research Institute, Shenyang Municipality External Affairs Service Center, Shenyang Municipality Personnel Exchange Center, etc.

(7) How to think about the Future

1) Establishment of Shenyang SME Renovation Fund

Shenyang Municipality SME Renovation Fund should be established and the support provided to SME, especially to the high-tech enterprises.

2) Enhancement of the information ability of the enterprises and the reform of the traditional industries

To enhance the information ability of SME and reform the information ability of SME by using the information technology and endeavor to intensify and promote the establishment of the service systems of SMEs.

3) Construction of the network for information

To build up the network of the service systems of SMEs, promote the information ability of SMEs, introduce the electronic trade service and enhance the competitiveness of SMEs.

4) Reinforcement of the education and training

For the enterprises and the society, through the training of the various businesses and personnel of different fields, the contribution should be made to the progress of the enterprise and society.

5) Construction of the intermediating system

The consulting services should be intensified, such as the enterprise diagnosis, technical consulting, corporate planning, legal consulting, certification of the quality and cooperation to the applications of the enterprise for the project, etc.

6) To promote the process for the internationalization of SMEs

International exchange and cooperation should be further developed and especially the long-term and stable relation of cooperation with the globally famous intermediating organizations should be established, while, by thoroughly utilizing the various resources, the relevant information and development should be quickly understood, and the trend of the development of the present world should be grasped.

5.3.8 Policy for Environmental Protection Industry

As a component of the industrial policies, the policy for the environmental protection industry has been playing an important role in recent years. Although environmental protection is not analyzed from the viewpoint of government policy at the present stage of the Study, the results of the analysis of the problems of this sector are described below. This analysis was conducted in view of the fact that the industrial protection sector is listed as one of the four subject sectors of the Study. The environmental protection industry has only a short history and the division of the roles of SMEs and larger enterprises has not yet been clearly established by the Study.

To start with, the “Basic Statistics for 122 Enterprises in Environmental Protection Industry in Shenyang in 1999” and the “Current Situation and Analysis of Development of Environmental Protection Industry in Shenyang”, both of which were provided by the Office of Environmental Protection Industry, are examined.

These reference materials identify 122 enterprises in this sector in Shenyang but it is unknown whether or not the coverage is 100 %. In fact, the enterprises visited by the Study Team are not included in the statistics even though they are classified as environmental protection-related enterprises for the purposes of the Study. In the case of the present analysis, however, the rate of coverage is assumed to be 100 %.

While the five areas listed below are identified as constituting the environmental protection industry, it is unknown what types of promotion measures are available for each area or combined areas (and their relationship with SMEs). This point will be further investigated during the Second Field Survey.

In 1999, these 122 enterprises were reported to have a combined turnover of RMB 2.9 billion and profit of RMB 420 million which constituted a 96 % and 62 % increase respectively on the previous year.

(1) Environmental Protection Equipment and Products: 49 enterprises

These enterprises accounted for 65.7 % (RMB 193 million) of the total production value of the industry with sewage treatment equipment accounting for 80 % of the 193 RMB million. Tehuan Corporation is by far the largest enterprise with a production value of RMB 143 million, indicating a virtual monopoly of the market, as the production value of the second largest enterprise is less than RMB 100 million.

The production value of air pollution-related equipment, such as dust removal, desulphurization and denitration equipment, of 20 % of the total production value is relatively low (it is unknown if incineration equipment is included or not). This poses a question in regard to the future prospects of environmental protection equipment and products even though the range of products is assumed to be related to the environmental protection policy of the central government.

(2) Technical Service: 18 enterprises

The total production value of these 18 enterprises was RMB 90 million which was a 300 % increase on the previous year. Clarification of the definition of technical service is required.

(3) Integrated Utilization: 41 enterprises

The total production value of these 41 enterprises was RMB 490 million. "Integrated utilization" means the integrated utilization of resources. However, clarification of its definition, including concrete examples, is required.

(4) Natural Protection: 3 enterprises

The total production value of these 3 enterprises was RMB 6.91 million which was the lowest of all as this area is still in its infancy.

(5) Low Pollution and Other Products: 11 enterprises

The total production value of these 11 enterprises was RMB 388 million which was a 280 % increase on the previous year.

Careful attention must be paid to the statistical figures compared to the previous year. Many of the 11 enterprises visited by the Study Team established their present form of business in 1998 or 1999. The turnover figure for 1999 is only available for three enterprises while production value data for the period from January to September or October 2000 is available for three others. Two enterprises have not yet reached the stage of compiling sales figures (the provision of sales figures in 2001 is anticipated).

While some enterprises were established as environmental protection businesses, others (particularly those linked to state enterprises) tend to have registered as a SME following the separation of the environmental protection-related section from a large enterprise. Accordingly, the turnover figure for the environmental protection industry recorded a net increase although those enterprises which were established pursuant to the separation of an

environmental protection-related section recorded a net decrease. It may, therefore, be the case that the total turnover for Shenyang has remained the same.

CHAPTER 6

CURRENT STATES AND PROBLEMS IN SMEs SUPPORT MEASURES

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6.1 Indirect Financing for SMEs

6.1.1 Development and Current State of the Banks in China

The banks in China are playing very important role in development of the economy and industries in the liberalization and restructuring process aiming at the market oriented economy. And, the Chinese banks also have been diversified and modernized to large extent.

The cycle of fund flow of a central economy and that of a market economy are quite different each other. In a central economy, i.e. the cycle starts first from the fiscal investment to bring the production expansion, and this production brings the increase of the income and financial resources so that the national economy develops.

Under the central economy, the key player of funding is the fiscal investment and loan, and the role of banks is not so important in general. Actually, the People's Bank of China was only one bank that replied all but simple banking service needs in the central economy system of China in the past.

Today, the commercial banks mediate savings both of the enterprises and the individuals, and the enterprises invest in plant and equipment by the bank loan to increase production. And, this production brings increase of national income as well as increase in savings. This is the development cycle of the market-oriented economy.

Mediation and creation of the confidence being executed through the banking system is the precondition of this development cycle. In China, the importance of fiscal investment and loan became remarkably small today. However, mortgages for indirect finance being much secured by sovereignty seem to be a base of confidence still now. It can be observed as a feature of the indirect financing practices of China.

The numbers of the various financial institutions including non-banks are as shown in the Table 6-1-1 below.

Table 6-1-1 Financial Institutions in China

(November 2000)

Kind of financial institutions	Number of banks
Central bank	1
Policy bank	3
State-owned commercial bank	4
Joint-equity commercial bank	10
Housing and savings bank	2
City commercial bank	88
Non-bank	328
Rural credit banks	40,000 more or less
Foreign capital financial institutions	191

Source: The State Council Economic Development Center

The Chinese banks can be classified into three groups; the State-owned commercial bank, Joint-equity commercial bank, and City commercial bank. Brief explanation on these banks is provided hereafter.

(1) State-owned Commercial Bank

By separating some banking business of the People's Bank of China, the Industrial & Commercial Bank of China, the Bank of China, and the Agricultural Bank of China were established in 1983. And, some part of public finance was separated to establish the China Construction Bank.

The People's Bank of China was specialized in the central bank function by this reform, and these four State-owned banks take over the large portion of function of fiscal expenditure at the same time.

Therefore, the mission of the State-owned banks at that time did not aim at good performance of commercial banking business but aim at the switching of financing system from the fiscal system to the banking system, under the national goal. The area of activity of banks provided for industry and commerce at that time is shown below:

The Industrial & Commercial Bank of China — Industrial and commercial finance in city areas

The Bank of China — Foreign exchange bank

The Agricultural Bank of China — Finance in rural areas

The China Construction Bank — Finance of basic construction investments

The Chinese government separated a policy-oriented business of State-owned banks, and established three policy banks; the China Development Bank, the Export-Import Bank of China, and the Chinese Agricultural Development bank in 1994. As a result, the Industrial & Commercial Bank of China, the Agricultural Bank of China, and the China Construction Bank become a specialized commercial bank principally and these three banks compete among them in the domestic market.

All of these banks are very huge in amount of total assets, in numbers of branches as well as in numbers of employees. However, they are not so strong in business efficiency and the financial structure so that these three banks make effort aiming at rationalizing of their operation now.

The State-owned banks has started the program for the bad loan processing by establishing the bad loan management companies to transfer the bad loans from banks to these management companies, and commence to process the bad loans by means of a securitization.

As a result, the main bodies of the banks are free temporarily from the pressure of the bad loan.

(2) Joint-equity Commercial Bank

The Joint-equity commercial banks may be classified into following three types by a regional extension of banks' market territories or by the purpose of establishment etc.

- 1) The banks that Britain established to unite the industrial capital, and the financial capital and to operate in whole countrywide:

The Bank of Communications, the CITIC Industrial Bank, the HuaXia Bank, the China Everbright Bank, and the China Minsheng Banking Corporation

- 2) The banks being established as joint venture for regional development purpose by local governments and state-owned commercial banks:

The Shenzhen Development Bank, the Guandong Development Bank, the Shanghai Pudong Development Bank, and the Hainan Development Bank

- 3) The banks being assumed to make a business in a region:

The China Merchants Bank and the Fujian Industrial Bank

The Bank of Communications revived in 1986, and this was the epoch-making affair that a real Joint-equity commercial bank appeared first time in China. Though twelve Joint-equity commercial banks were established in total, two of them have already disappeared. The Hainan Development Bank was driven in to failure by the financing's scorching to the resort development project etc. in 1998. The China Investment Bank founded in 1981 was absorbed to the China Development Bank in 1994. And the China Everbright Bank purchased the branches of that bank.

Ten Joint-equity commercial banks have developed well, and operate 4,657 branches with 94,859 staffs as of the end of 1999.

Total assets, deposit balance, and loans balance of all of them were RMB 1,460 billion Yuan, RMB 1,040 billion Yuan, and RMB 740 billion Yuan respectively. Return on capital ratio was 10%, and return on total assets was 0.65%. The Joint-equity commercial banks are the best in the business performance among three types.

The role of the Joint-equity commercial banks summarized in the report of the Banking Industry in China 2000 as described hereunder:

“With ten years efforts, the ten Joint-equity commercial banks have been getting stronger, and become an important part of Chinese financial system. The establishment and development of Joint-equity commercial banks in China has broken the monopoly of state specialized banks under the centrally-planned system, and facilitated gradually a new banking structure with multi-layer and varied financial institutions suited to market economy. Consequently, the role of market forces in allocating financial resources has been strengthened, the reform of financial system has been deepened, and the overall performance of China financial services has been improved.”

It can be said that the Joint-equity commercial banks relatively free from government interference can carry out the banking business based on their own entrepreneurship.

As the State-owned banks had dealing with the state-owned enterprises and the collective enterprises from long time ago, no deal can be provided for the Joint-equity banks other than dealings with the emerging enterprises such as SMEs or private enterprises. Those are the major customers of the Joint-equity commercial banks until now.

However, this is not a bad story. The reason is that there exist many small excellent enterprises with strong competitiveness which might secure future development of them.

These enterprises would demand huge amount of loans in line with their growth and the banks could enjoy good dealings with them. Therefore, the banks would also perform high growth and fair profitability.

The banking comes to be regarded as a promising business in China, and the application for new establishment of the Joint-equity commercial banks are seems to be accounted for considerable numbers today. If the existing deposits and loans rates would be kept even in the future, the banking businesses managed by the Joint-equity banks would be successful. And, it seems that the further increase of banks in number with high efficiency might bring substantial excellent banking services to their clients and might cause a desirable result for SMEs' development, too.

(3) City Commercial Bank

The City commercial banks have been established by means of amalgamating the city credit banks through cooperation among the local enterprises, the residents and the local governments. Therefore. The main customers of the City commercial banks are local citizens and local SMEs.

The establishment of the City commercial banks have been essential to the improvement and the development of the financial industry of China. After the experiments of this banking system reform in Shanghai and Beijing in 1994, the State Council decided to carry out same experiments in 35 cities in the 1995. The region extended in addition afterward, and the licenses have been applied to 92 City commercial banks as of 1999.

Eighty eight banks of them are already operating and total asset, total deposit outstanding balance, total loan outstanding balance and numbers of employees were 554.7 RMB billion RMB, 441.3 RMB billion RMB, and 227.1 RMB billion RMB and 106,058 peoples respectively. Return on capital ratio was 0.26%, and return on total assets was 0.01%.

For only several years from the birth, the City commercial banks have expanded the business scale to occupy new and important part of the financial system of China.

The City commercial banks that stick to the local community play important role in a reduction of a financial risk, and play important role in SMEs' support as well as in local economic development.

Table 6-1-2 Establishment of Banks in China

Year	State-owned Bank	Joint-equity Commercial Bank	City Commercial Bank
1981		China Investment Bank	
1983	The Industrial & Commercial Bank of China, The Bank of China, The Agricultural Bank of China, The China Construction Bank		
1986		The Bank of Communications, The China Merchants Bank	
1987		The CITIC Industrial Bank The Shenzhen Development Bank	
1988		The Guandong Development Bank, The Fujian Industrial Bank	
1992		The Hua Xia Bank	
1993		The Shanghai Pudong Development Bank	
	The China Development Bank, The Export-Import Bank of China, The Chinese Agricultural Development Bank	The China Everbright Bank	
1995		The Hainan Development Bank	The Bank of Shanghai
1996		The China Minsheng Banking Corporation	The Beijing City Commercial Bank
1997			The Shenyang City Commercial Bank

Note: The Hainan Development Bank failed in 1998 the financing collection to the resort development investment.

Source: The JICA Study Team

6.1.2 Commercial Bank Law of the People's Republic of China

The commercial bank law is the most important compass that guides the activities of Chinese commercial banks today. This law consists of 9 Chapters of 91 Article, and request a severe rule with the commercial banks as well as bank clerks. It is observed that this law might bring a careful lending posture of the commercial bank on one hand, might result a steady financial order on the other hand. The general provisions of the law is as shown below.

The General Provisions

(Adopted at the 13th Meeting of the Standing Committee of the Eighth National People's Congress on May 10, 1995, promulgated by Order No. 47 of the President of the People's Republic of China on May 10, 1995, and effective as of on July 1, 1995.)

Chapter 1 General Provisions

Article 1 This Law is enacted with a view to protect commercial banks, depositors' and other customers' lawful rights and interests, to correct the act of the commercial banks, to aim at the quality improvement of the credit properties, to strengthen the supervisor and control, to maintain steady management and financial order and to promote the development of a socialist market economy.

Article 2 The commercial banks are the corporations those accept the deposits for the society. lend the capital and accept the settlements, based on this Law and "Company Law of the People's Republic of China".

Article 3 The scopes of management of the commercial banks are all or part of the following business.

- (1) To accept deposits for the society
- (2) To supply short term, middle term, long-term loans
- (3) To handle domestic and foreign settlement business
- (4) To handle bill discount business
- (5) To issue financial debentures
- (6) To take charge of representation issues and cash payment agency of the government debentures, and to underwrite the government debentures
- (7) To buy and sell of the government debentures
- (8) To handle inter-bank business
- (9) To deal or to agent foreign exchange
- (10) To issue letter of credit and to offer guarantee services
- (11) To handle payment and receipt business, and insurance business as an agent.
- (12) To handle safe-deposit service.
- (13) To handle other business which the People's Bank of China admits.

The scope of management must be put in to the commercial bank's certificate of incorporation, and the declaration to and the recognition acquisition from the People's Bank of China are needed.

- Article 4 The management principle of the commercial banks is the assumption of the profitability, safety, and liquidity and the commercial banks carry independent management, take risk, self-bear responsibility and self-manage profit and loss.
When the commercial banks undertake the business according to the law, any organization and individual must not interfere them.
The commercial banks assume the civil responsibility with their corporate properties.
- Article 5 Principles of the commercial bank should be equal, free, impartial, mutual trust in the business transaction with the customers.
- Article 6 The commercial banks should guarantee that any depositor's lawful right and interest receive the transgression of neither any organization nor individual.
- Article 7 When the commercial banks undertake the credit business, the commercial banks must investigate confidence of borrowers severely, secure the counter guarantee of borrowers and secure financing collection as same as the period contracted.
The commercial banks collect principal and interest of the loan of the period expiration from borrower according to the law, and the act is protected by the law.
- Article 8 When the commercial banks undertake the business, the commercial banks must obey the relating laws and regulations and must harm neither national profit nor a social public profit.
- Article 9 When the commercial banks undertake the business, the commercial banks must keep a fair competition. Must not unjustified compete.
The commercial banks receive supervise and control of the People's Bank of China according to the law.

6.1.3 Activities of Various Chinese Banks

The market share of the Chinese banks by type is summarized as Table 6-1-3.

The State-owned Commercial Banks, the Joint-Equity Commercial Banks, and the City Commercial Banks keep the lending share 70.2%, 9.2%, and 3.5% respectively, as of June 2000.

The State-owned Commercial Banks are still occupying an overwhelming market share in loans and deposits. However, on the one hand the State-owned Commercial Banks have been decreasing their business share in a long term, and on the other hand the Joint-Equity Commercial Banks and the City Commercial Banks have increased their share in both of loans and deposits.

Table 6-1-3 Deposits and Loans by Type of Banks
(Integrated base of foreign & local currency)

Unit: RMB 100 million Yuan, Composition: %

	Year	Policy banks	State-owned commercial banks	Joint-Equity Commercial Banks	City Commercial Banks	Foreign capital bank banks	Total
Loans	1999.12	377.7	76,188.0	10,389.0	4,413.1	430.4	9,1798.2
Loans	2000.06	366.2	82,025.0	12,003.4	4,588.9	461.5	9,9445.0
Deposits	1999.12	13,121.1	62,494.3	7,046.4	2,711.3	1,807.5	8,7180.6
Deposits	2000.06	13,171.7	60,975.5	8,015.3	3,014.0	1,724.2	8,6900.7
Loans	1999.12	0.4	83.0	11.3	4.8	0.5	100.0
Loans	2000.06	0.4	82.5	12.1	4.6	0.5	100.0
Deposits	1999.12	15.1	71.7	8.1	3.1	2.1	100.0
Deposits	2000.06	15.2	70.2	9.2	3.5	2.0	100.0

Source: Compiled based on data from the Banking Industry in China 2000

6.1.4 Terms and Conditions of Loans

The terms and conditions of loans being controlled by the central bank are basically same among the types of bank. For instance, lending interest rate is set within the range of the +30 % to -10% of the legal lending interest rate (Refer to Table 6-1-5).

The rating on borrower's confidence is provided to rank by six stages from triple A to single B. The banks apply the rating for the screening of application for loan and/or for decision of the terms and conditions of loans. The rating is carried out by two kinds of procedure; execution by the bank themselves and execution by the independent ranking agencies. For instance, the Industrial & Commercial Bank of China executes its rating by oneself on one hand, the China Construction Bank, and the Agricultural Bank of China execute their rating by the independent ranking agencies on the other hand.

The kind of the loans is limited. The major loans are short-term ones within six months or within one year.

Enterprise can open only one basic dealing account in the bank. And, banks require monthly submitting of business report to enterprises. Therefore, the banks can obtain sufficient information on the management situation, business performance and financing situation of the enterprises.

The banks manage their debts by classifying them into five stages as same as the practices of the Japanese banks. The regular financial inspections of the central bank are strictly executed biannually when some financial problems occur occasionally, the central bank is carrying on a temporary inspection at any time in addition.

Table 6-1-4 China Standard Interest Rate of the People's Bank of China

Unit: %/year

	1995	1995	1996	1996	1997	1998	1998	1998	1999
	01.01	07.01	05.01	08.23	10.23	03.25	07.01	12.07	06.10
One year	10.89	11.16	10.98	10.62	9.36	7.92	5.67	5.13	3.78
Within 6 months.	10.71	10.98	10.17	10.17	9.09	6.84	5.58	5.04	3.69
Within 3 months	10.44	10.62	10.08	9.72	8.82	7.02	5.49	4.86	3.51
Within on 20 days	10.26	10.44	9.00	9.00	8.55	6.39	5.22	4.59	3.24

Source: The Banking Industry in China 2000

Table 6-1-5 Legal Lending Interest Rate of Financial Institution

Unit: %/year

	1996	1996	1997	1998	1998	1998
	05.01	05.01	10.23	03.25	07.01	12.07
liquid capital loans						
General: 6 months	9.72	9.18	7.65	7.02	6.57	6.12
General: 1 year	10.98	10.08	8.64	7.92	6.93	6.39
Individual business	Being increased by 10% to 10.98%	Being increased by 10% to 10.08%	Being increased by 10% to 8.64%			
Basic construction loans						
within 1year	11.52	10.08	8.64	7.92	6.93	6.39
1-3 years	13.14	10.98	9.36	9.00	7.11	6.66
3-5 years	14.94	11.70	9.90	9.72	7.65	7.20
5 years or more	15.12	12.42	10.53	10.35	8.01	7.56

Source: Almanac Chinese financial yearbook 1999

Table 6-1-6 Legal Deposit Interest Rate of Financial Institution

Unit: %/year

	1996	1996	1997	1998	1998	1998
	05.01	05.01	10.23	03.25	07.01	12.07
Individual						
Ordinary deposits	2.97	1.98	1.71	1.71	1.44	1.44
Time deposit						
3 months	4.86	3.33	2.88	2.88	2.79	2.79
6 months	7.20	5.40	4.14	4.14	3.96	3.33
1 year	9.18	7.47	5.67	5.22	4.77	3.78
2 years	9.90	7.92	5.94	5.58	4.86	3.96
3 years	10.80	8.28	6.21	6.21	4.95	4.14
5 years	12.06	9.00	6.66	6.66	5.22	4.50

Source: Almanac Chinese financial yearbook 1999

6.1.5 Financing of SMEs

(1) Government Policy for Financing Support to SMEs

As far as the financial policy is concerned, the Government has disregarded SME financing for a long period. For instance, the Central Bank issued “the general rules of the lending” and “the ten measures to improve financial services to large and medium scaled state-owned enterprises” in 1996. These regulations stated that lending of the State-owned Banks should put emphasis on the upbringing and development of social large-scale production, distribution and markets, city credit unions and regional commercial banks should lend to small-scaled production and markets.

In 1988, this policy was converted so that the State-owned Banks also must promote SMEs lending. The major policy measures provided thereafter for SME financing improvement are summarized as follows:

- 1) The State Council and the Central Bank have issued several notifications for the State-owned Banks to promote SMEs support in financing.
- 2) The Government constitutes new banking system particularly aiming at SMEs development support. That is, establishment of the City Commercial Banks by means of the consolidation of city credit banks and unions.
- 3) The Central Bank guides the State-owned Commercial Banks to set up a SMEs financing promotion system in their operations.

- 4) The Government and the Central Bank clarifies the types of SMEs who should be supported by the SMEs financing support measures (ex. high-tech SMEs with sufficient repayment capacity etc).
- 5) The Government promotes the foundation of SME credit guarantee centers in major cities.

Among these policies above mentioned, measures of 2) and 5) bring remarkable results so far. A lot of SME credit guarantee centers are established in the major cities, and the scale of the fund reaches RMB 4 billion Yuan or more at the middle of 2000.

However, it is not clear whether or not these policy measures contribute actually to an increase in the SMEs financing as a whole. Since the Central Bank guides the commercial banks to promote SMEs in lending on one hand, its guides them at the same time to control the lending risk strictly on the other hand. As a matter of fact the screening of application of loan by the commercial banks becomes more sever than before as a result. While the financing to excellent SMEs or a high-tech SMEs, etc. may increase surely, the financing to the SMEs with a lower rating possibly decrease.

(2) The State of SMEs Lending

According to the official information that was disclosed at the SME forum being held in Zhenjian city of Chiangsu province in December 1998, the outstanding balance of SMEs loans of the banks accounted for 38% of the total lending of them or RMB 1,700 billion Yuan (by RMB 800 billion Yuan of outstanding balance of loans of the Agricultural Bank of China, by RMB 320 billion Yuan of that of the Industrial & Commercial Bank of China, and by RMB 600 billion Yuan of that of the City Commercial Banks and rural credit banks) at the end of March, 1998.

(3) Activities of the China Construction Bank

The China Construction Bank is the second largest Chinese bank with RMB 3,000 billion Yuan of total assets, RMB 1,600 billion RMB of outstanding balance of loans, around 30,000 numbers of branches and sub-branches and around 400,000 employees.

This bank that positively has advanced the commercial banking operation for a long period is also positive in the SMEs financing. Based on its own classification standard; SMEs are the enterprises performing less than RMB 500 million Yuan in annual turnover. The share of SMEs loan outstanding balance of the bank is already accounted for about 50% of the total one.

Moreover, this bank is declaring the positive cooperation with various SMEs credit guarantee funds. Though the bank does not set up a special organization for SMEs financing operation in its regional branches, it has the SMEs loans committee in headquarter.

There is actually a huge gap in the SMEs lending execution among its regional branches. The Liaoning province branch is not being interested in the SMEs lending so far on one hand, its branches in southern provinces are doing that as main business today on the other hand. According to the Liaoning province branch of the China Construction Bank, it carries out lending selectively to the foreign SMEs in the region under the risk control strategy of it.

A highest member of the SMEs loans committee expressed his idea of reflecting the result of the JICA Study in its future lending policy.

(4) Activities of the China Minsheng Banking Corporation

The China Minsheng Banking Corporation is the only one private bank of China.

The major business of the bank is lending to high-tech SMEs. This young bank was founded by equity from 40 private enterprises in January 1996, and already listed the stock in the Shanghai securities exchange market on December 19, 2000.

This would be a typical example of a rapid growth potential of the Joint-Equity Banks by a mutual development with a lot of SMEs clients with high growth potentiality.

The brief summary of the SMEs financing activities and profile of the bank are as follows:

Profile of the bank

Stockholder:	58 companies (The member companies of the China Federation of Industry & Commerce are joining chiefly except one state-owned enterprise.)
Paid up capital:	RMB 6.5 billion Yuan
Total assets:	RMB 46 billion Yuan
Outstanding balances of loans:	RMB 32-33 billion Yuan
Branch and office:	8 branches and 60 operating offices

Bank clerks:	the number of bank clerks is 2, 600 people, average age 31 years old, and 70% or more are more than the learning of graduate.
System of the appraisal:	15 staffs of headquarters, and 6-10 staffs of each branch are arranged.
SMEs lending:	60% of outstanding balance of lending is SMEs loans.
Scale of the lending:	RMB 10 -30 million Yuan a company
SMEs credit guarantee center:	This bank is studying about the credit guarantee funds in Shanghai, in Wohan, and in Beijing. The bank desires allot of the risk taking with the guarantee organization and bank share 80% and 20% respectively.

6.1.6 Feature of Fund Raising

Figure 6-1-1 is an illustration of SMEs funding sources studied by the State Council Economic Development Center.

As a few SMEs carries out their funding by issues of stock or bond, and by commercial bill, the major funding source of SMEs in China are those three means of the internal financing, the credit among corporations and the bank loans. This is corresponding to the result of the 100 SMEs survey being carried on now by the JICA Study Team.

The Study Team does not agree to some classification of the study regarding the internal sources; the source of funds such as company owners loan or employees' loan should be regard as external ones.

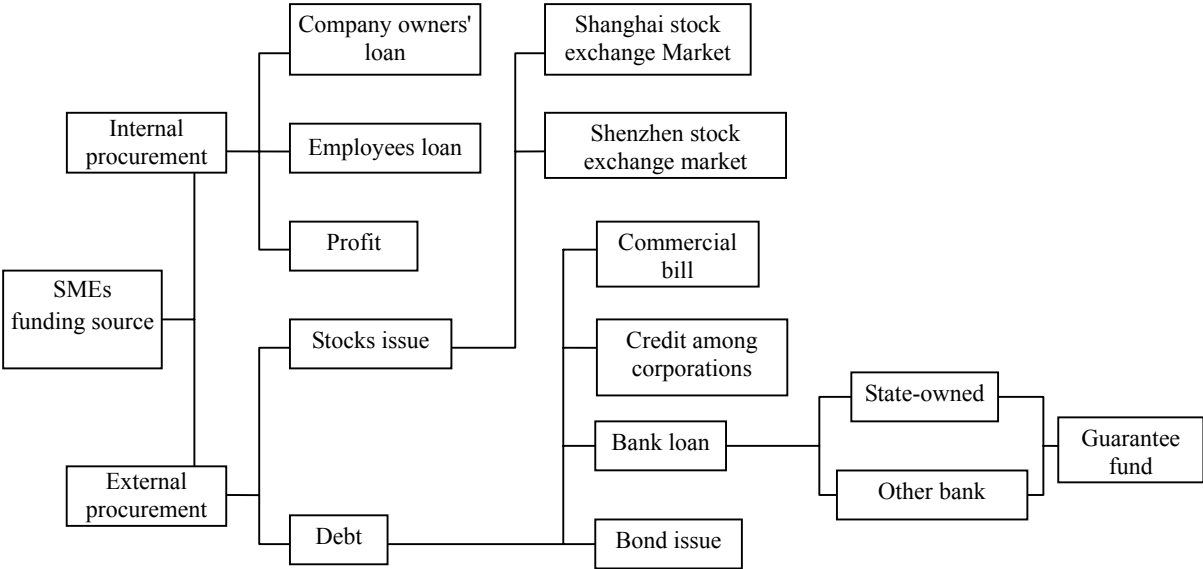
Anyway, while the company owners' loaning is observed in the world in general, the employees' loaning may be seldom seen except in China SMEs.

This loaning appears in case that the employees of a state-owned SME acquire the stocks by management buy-out of the SME, and if this SME suffers financing shortage later, the employee stockholders would lend money to the company. The privatization of small state-owned enterprises has being promoted in recent years; therefore such phenomenon is widely spread. By the way, as this financing method has been spread out in China, there shall be needed an appropriate system arrangement as well as regal arrangement regarding the repayment of the employees financing and stock exchange of stocks held by the employees.

Funding by the credit among corporations is an undesirable fund procurement practice, in the global standard of view. This practice often brings bad debt both of lender and borrower. However, China SMEs used to do this funding in the past time.

The bank loan seems to be a general funding method of the state-owned SMEs and privatized SMEs. However, average private SMEs hardly access to the bank loan even today. Different accessibility by the ownership of SMEs evident that the corporate confidence of China still might be backed up by the sovereignty to large extent.

In this context, the SMEs credit guarantee center could be said as a social creditor system by which intermediates the local government confidence to SMEs in order to fill shortage of SMEs credibility.



Source: The State Council Economic Development Center

Fig. 6-1-1 Funding Source of SMEs in China

6.1.7 Banks in Shenyang

As Shenyang is the so-called center city of the Northeast China, and the financial institutions are also considerably enhanced in the city today.

The People's Bank of China (central bank), four State-owned Commercial Banks, six Joint-Equity Commercial Banks, one City Commercial Bank and many rural credit banks operate in Shenyang. As they offer banking services through many branches and sub-branches

to the local clients, so it could be said that almost all of indirect funding channels to where SMEs can access in the City are fairly arranged (refer Table 6-1-7).

However, four Joint-Equity banks which are aggressive in deals with SMEs and private enterprises such as the China Minsheng Banking Corporation, the Shenzhen Development Bank, the Fujian Industrial Bank and the Shanghai Pudong Development Bank do not set up the branches in Shenyang so far.

Table 6-1-7 Banks Operating in Shenyang

Banks with headquarter, branches and sub-branches in Shenyang	Numbers of headquarter, branch, and sub-branch
The People's Bank of China	4
The Bank of China	10
The Industrial & Commercial Bank of China	61
The China Construction Bank	49
The Agricultural Bank of China	67
The Chinese Bank of Communications	6
The China Merchants Bank	9
The CITIC Industrial Bank	6
The Guandong Development Bank	2
The China Everbright Bank	3
The Hua Xia Bank	5
The Shenyang City Commercial Bank	38
Rural credit banks	91

Source: the JICA the Study Team

6.1.8 Bank Deposits and Bank Loans in Shenyang

In Shenyang, the bank deposits and loan outstanding balances had increased steadily through 1990's. And, while the share of the individual deposit outstanding balance had increased, that of the corporation deposit outstanding balance had decreased a little and those of government sector and agricultural sector had been greatly depressed.

In bank loan outstanding balance, it is noticeable that the share of the industrial sector dramatically depressed from 50% of 1990 to 31% of 1999.

How should the level of the deposit and lending of this city be evaluated?

The Study Team attempted a relative comparison between Shenyang and average of the four major cities in the Northeast China; Shenyang, Changchun, Dalian, Harbin, by using per capita indices concerned.

The index of per capita deposit outstanding balance and per capita loan outstanding balance of the Shenyang City to the average of the four major cities were 89% and 80% respectively. This may suggest a little slump of financial activities in Shenyang.

The index of individual savings per capita in Shenyang City was 129% and this fact may provide the evidence that the slump of the enterprises deposit outstanding balance in the Shenyang City might cause total slump. One of the worst indexes of Shenyang was gross output of the industry to show only 63% of the average index.

Table 6-1-8 Transition of the Bank Deposit and Bank Loan Outstanding Balance in Shenyang

(Amount)	Unit: 10000 RMB			
	1990	1995	1998	1999
Deposit total	1,780,648	5,778,904	8,957,962	10,398,512
Business	543,117	1,641,674	2,468,286	2,932,243
Fiscal	97,674	96,777	41,518	47,656
Individual	896,363	3,962,323	6,168,079	6,940,076
(time deposit)	761,909	3,442,741	5,175,136	5,588,730
Agriculture	73,574	36,000	23,511	88,484
Loan total	2,388,570	5,723,303	8,460,637	9,760,527
Short-term loan	1,948,792	4,456,511	6,352,283	7,150,987
Industry	1,207,372	2,273,936	2,847,183	3,058,107
Commerce	634,063	1,583,456	2,353,607	2,700,370
Construction	47,169	101,170	152,348	161,291
Rural enterprises	28,645	64,252	96,111	101,162
Agricultural	31,273	93,061	207,970	218,319
Mid/long-term loan	360,557	1,103,323	2,029,918	2,302,581
Technological innovation loan	253,656	781,896	879,460	756,318
Basic construction loan	66,099	167,261	520,793	1,082,188

(Composition ratio)	Unit: %			
	1990	1995	1998	1999
Deposit total	100.0	100.0	100.0	100.0
Corporation	30.5	28.4	27.6	28.2
Fiscal	5.5	1.7	0.5	0.5
Individual	50.3	68.6	68.9	66.7
(time deposit	42.8	59.6	57.8	53.7
Agriculture	4.1	0.6	0.3	0.9
Loan total	100.0	100.0	100.0	100.0
Short term loan	81.6	77.9	75.1	73.3
Industry	50.5	39.7	33.7	31.3
Commerce	26.5	27.7	27.8	27.7
Construction	2.0	1.8	1.8	1.7
Rural enterprises	1.2	1.1	1.1	1.0
Agriculture	1.3	1.6	2.5	2.2
Mid/long-term loan	15.1	19.3	24.0	23.6
Technological remodeling loan	10.6	13.7	10.4	7.7
Basic construction loan	2.8	2.9	6.2	11.1

Source: Shenyang statistics yearbook 1999

Table 6-1-9 Economic Indices of Shenyang City and Major Four Cities
 Relativity of per Capita Indices
 (Average of Per capita value of Shenyang, Dalian, Changchun, Harbin = 100)

Gross industrial production	62.7
Fixed assets investment	106.3
Retail sales	86.8
International trade	33.3
Fiscal revenue	74.8
Fiscal expenditure	76.3
deposit outstanding balance	89.0
loan outstanding balance	80.3
Number of employees (*)	105.3
Number of unemployed (*)	156.7
Wage	96.9
Disposable income	98.5
Amount of savings	129.6

Note: The item of the sign* is an absolute figure
 Source: Making from Shenyang yearbook 2000

6.1.9 SMEs Loan

No statistic is available on the SMEs loans in Shenyang. According to a opinion of a local banker, the State-owned banks have a overwhelming share by SMEs loans in where the Industrial & Commercial Bank of China has the largest share, the China Construction Bank and the Agricultural Bank of China have the second and the third largest ones respectively. And the banker indicated that the share of the Joint-Equity Commercial Banks is still very small compared with the State-owned banks.

Table 6-1-10 shows a statistic data of the loan (not SMEs loan) outstanding balance of the top five banks in Shenyang. Though the share of the Industrial & Commercial Bank of China was large overwhelmingly, this means that the bank had been only one official financial institute that had deal with all industrial and commercial business financings, in the past banking resume. This bank is good at deal of big financings for large-scale enterprises and for large-scale projects, etc. today. However, it is not so competitive in the SMEs financing because of a high cost structure and so on.

The China Construction Bank began to do SMEs lending positively in Shenyang and became the partner bank of the Shenyang city SME credit guarantee fund in September 2000. Moreover, this bank tries to establish a tie-up with the Shenyang Federation of Industry & Commerce to promote some collaboration work with the association for the financing to excellent SME members of it.

Table 6-1-10 Loan Outstanding Balance of the Major Banks in Shenyang (1998)

Name of bank	RMB 100 Mil. Yuan	
	Various loan	Short-term loan
The Industrial & Commercial Bank of China	423.73	322.79
The China Construction Bank	84.17	56.64
The Agricultural Bank of China (Liaoning province: Industrial loan)	37.19	n. a
The Bank of China	57.83	55.74
The Bank of Communications (Liaoning province)	17.46	n. a

Note: Figures on SMEs loan is not available.

Source: Almanac of China's Finance and Banking 1999

6.1.10 Financing Activity and Credit Guaranteed Financing of Individual Bank

The Study Team carried out the interview survey for corporate financing of four partner banks of CGF (the China Construction Bank, the HuaXia Bank, the Guangdong Development Bank, and the Shenyang City Commercial Bank).

Moreover, the Study Team visited twice the headquarters of the China Construction Bank and the China Minsheng Banking Corporation in November 2000 and in February 2001. The Team discussed with distinguished director and general manager of those about the promotion strategy of SMEs financing in Shenyang. The activities of each bank in the front of SMEs financing are as follows:

(1) SMEs Financing of the Shenyang City Commercial Bank

The Shenyang City Commercial Bank was founded as the collaboration bank by integration of majority of the city credit banks in 1987, and became the city collaboration bank by acquiring all remaining city credit banks in the city in 1997. The Shenyang city government is the biggest shareholder of the bank.

This is a typical regional bank for local SMEs financing, and the quality of services and the performance of the business are very good. Moreover, the bank have brought up the famous big enterprise; the Environment Protection Group from its infant stage.

The profile of this bank at the end of 1999 was as follows:

- Total assets: RMB 10 billion Yuan
- Corporate loan outstanding balance: RMB 6.3 billion Yuan
- Numbers of the corporate financing account: 5,300
(The numbers of the deposit account of corporations are 37,000)
- Share of SMEs loan: 80% of the total loan outstanding balance
- Number of employees: 2,100 persons
- Appraisal period for loaning: within one week for existing client and within month for new client.
- Average outstanding balance per enterprise: RMB 0.7-0.8 million Yuan
- Assessment rate of collateral: 50-70%
- Percentage of credit losses: 2-3%
- Capital adequacy ratio: 9%

This bank indicated following four points of SMEs' financing difficulties:

- 1) Because of rapid change of management, the property transition of SMEs is not so transparent.
- 2) Because of small business scale and short business history of SMEs, the bank cannot ascertain the prospect of SMEs' products easily.
- 3) There exists certain mismatch between demand and supply of funds. While SMEs demand long-term bank loans, the bank supplies short-term funds to them.
- 4) As the history of the enterprises is short, the evaluation of SMEs confidence by the bank is not so easy. In addition, there are a lot of incredible collaterals those are offered by SMEs to the bank for guarantee.

The bank cooperated with CGF in November 2000. And, two guaranteed loans were pledged by the end of March 2001. The amount of the loans was rather small as RMB 500,000 Yuan and RMB 200,000 Yuan. The flow of the guaranteed loan was one way that CGF would find SMEs borrowers to introduce them to the bank to be appraised by the bank. The bank did not appreciate the scheme because the bank still should take the financial risk of 30% of the loan and this might not sure that would secure lower risk comparing the ordinary loan accompanied by the sufficient mortgage with low assessment rate. On the other hand, SMEs also would not be given any favorable treatment by the scheme in the loan conditions. Therefore, the bank would not positively introduce SMEs to CGF for the application of the scheme and the bank did not recommend the bank clerks to promote the scheme. The bank would correspond to the request of SMEs introduced those would want to open the accounts of the Shenyang City Commercial Bank.

(2) SMEs Financing of the China Construction Bank Shenyang Branch

The Shenyang branch of the China Construction Bank installs 21 sub-branches in the city. The numbers of bank clerks is about 4800 people. SMEs loan outstanding balance was RMB 12.5 billion Yuan as of the end of 2000, and SMEs loan outstanding balance was counted for about 70% of the total, based on the own definition of SME that an enterprise performs less than RMB 500 million Yuan in the annual turnover. The numbers of corporate loan accounts reached 4000, and SMEs' accounts exceeded 90% of the total number. Two third of the loan outstanding balances were short-term loan and the one third of them were long-term loan. SMEs can borrow funds easily from the bank, if those are ranked in the rating to double A or higher. Either the original rating appraisal by the bank or the external rating appraisal by the third party is available. This bank carries out appraisal strictly to check the application of fund and content of the project

plan. Besides that, the borrowers must prepare 30% of the loan amount by themselves. This bank keeps own guideline to finance capital to high-tech SMEs emphatically.

In addition that, the bank gives priority in lending to the private enterprises and the foreign companies because of the development potential or good financial structure of them. This bank is the largest partner bank of CGF, however there is no contract of the credit guaranteed loan yet. The bank's staff in charge of the promotion of SMEs financing told the Study Team that the bank would make effort to promote this scheme in 2001.

(3) Activities of the China Minsheng Banking Corporation

This bank listed the stock to the Shanghai Securities Exchange in December 2000. The president of the bank said to the Study Team that the bank was more interested in Hanzhao than in Shenyang for its SMEs financing. Though he had already informed the Study Team beforehand that the bank had a plan to establish the branch in Shenyang, he clarified the timetable that the plan would be executed by the end 2001, at the occasion of second meeting with the Study Team. It is expected that the advancement of this bank, which is the only one private bank of China, would produce a good influence for the regional economy where a conservative business climate still remains to some extent.

The bank has been considering the tie-up with CGF since before. As a matter of fact, the bank has already cooperated with the Dalian credit guarantee fund in which the DFID assists the operation as same way as in CGF.

(4) SMEs Financing of the HuaXia Bank Shenyang Branch

The HuaXia Bank advanced to the Shenyang City in February 1999. The branch manages five sub-branches and one operation office with 177 of bank clerks. Demand for the bank's services is very vigorously so that the bank is going to expand the facilities in double to ten sub-branches by the end of 2001. The loan outstanding balance already reached RMB 3 billion Yuan including RMB 2.8 billion Yuan of the SMEs loan etc., at the end of 2000. According to the bank's definition, SME is an enterprise that performs less than RMB 500 million Yuan in the annual turn over or less than RMB 500 million Yuan in the total asset. In the manufacturing sector, the bank financed to more than 300 small and medium-sized manufacturing enterprises, and loan outstanding balance was RMB 1.6 billion Yuan in total or RMB 5 million Yuan in the mean value per enterprise.

The HuaXia Bank is the only one bank, which cooperates with both of the credit guarantee funds of CGF and the Private Economy Development Commission. The bank

declared that it disbursed the credit guaranteed loan to more than ten SMEs and it would carry out another tens of the credit guaranteed loan soon.

The bank knew about the new establishment plan of the guarantee funds at wards and prefectures, and the bank had the positive intention to cooperate with them in the near future.

(5) SMEs Financing of the Guangdong Development Bank Shenyang Branch

The Guangdong Development Bank advanced to the Shenyang City in June 1998. The branch manages six sub-branches with 120 of bank clerks. According to the bank, more than 90% of its clerks have job experience in the state-owned commercial banks or in the non-banks, so that this bank can compete with other banks based on the similar human skills. About 20% of the loan outstanding balance of the bank was that of small and medium-sized manufacturing enterprises, though the accurate amount of that was not disclosed.

In order to secure the management efficiency of the bank and to make prompt financing contract, the bank selects excellent enterprises for the corporate financing. The bank indicates in this respect that as the SME sector is the weakest economic link, the bank cannot do nothing but appraise the risk or confidence strictly. However, SMEs are playing important role in Chinese development so that SMEs financing is treated as the major market of the bank today. The bank is financing only to excellent SMEs those have sufficient capacities in general management and financial management with a good profitability. And, as a matter of fact, the bank enjoys a seller's market position that even such excellent SMEs eager to get the bank loans.

The bank succeeded the credit guaranteed loan, but the numbers of contract was not disclosed. The bank is informed there is a plan of establishment of provincial high-tech guarantee fund, and the bank is not sure whether it will cooperate with the fund or not. In short, the bank does not appreciate the credit guaranteed financing so much.

As mentioned above, each bank interviewed has self-confidence in its own activities as the financial institution without any cooperation of the credit guarantee funds as well as of the private economic organizations. The major market of these banks would be the SMEs financing being concentrated in excellent ones and this market would be growing rapidly. The banks that once advanced and operate sub-branches in the city made big efforts to sustain the organizations, and this fact brought a vigorous development of the SMEs financing as a result.

It is obvious that the attraction of powerful Joint-Equity banks to advance here is still the best measure to solve the financing difficulties of SMEs with high benefit cost ratio. The HuaXia Bank performs remarkable results in the credit guaranteed financing with CGF so far. This bank might be seen as the main bank of CGF actually, because the fund of CGF is deposited to the bank.

However, the portion of the credit guaranteed loan is very small even in the HuaXia Bank. Therefore other banks seem rather cool-hearted concerning the credit guaranteed financing so far.

6.1.11 Survey on Fund Raising of SMEs in the Liaoning Province

It is assumed that the most serious obstruction factor against the SMEs development in China is the financing difficulty of them according to a lot of surveys and theses concerned. If so, it is necessary to carry out further analysis to clarify the causes of the phenomenon. Otherwise no one can provide any solution of the problem appropriately.

The Study Team acquired very important survey report concerned. This survey indicated the financial affairs of the 548 SMEs in the Liaoning province of which 80% more or less might be consisted of SMEs in Shenyang. The net profit of these SMEs had been negative in every year for the past four years and the ratio of total liabilities to total asset of those was almost the negative sign.

Generally speaking, it is difficult for SMEs of such serious financial structure and business performance to obtain the bank loan newly. Nevertheless, the enterprises those have the debt in the equipment fund and the working capital was accounting for about 30% and about 60% respectively. The similar result got by the JICA questionnaire survey in where about seventy percent of the SMEs had the bank debt. However, there were many cases observed that SMEs could not make sufficient profit to repay the debt and caused the bad loan of the banks. As the result, the relationship between these SMEs and the banks seemed not good today. The major cause of the financing difficulty of SMEs seems not the shortage of the capital resources of the financial institutions but the insufficient credibility of the SMEs.

Table 6-1-11 Debt Ratio and Profit of SMEs in the Liaoning Province

	1995	1996	1997	1998
Debt Ratio (%)				
Total	96	99	100	101
State-owned	87	95	96	98
Collective	75	76	73	71
Private-owned & individual	123	121	131	126
Joint venture	74	73	77	76
Group	87	85	108	101
Others	80	78	67	73
Average Profit (10,000 Yuan)				
Total	-266	-248	-208	-216
State-owned	-168	-238	-170	-194
Collective	-10	-28	-27	-41
Private-owned & individual	-1788	-1809	-1662	-1306
Joint venture	-102	-47	-60	-89
Group	64	22	100	-28
Others	-35	63	71	68

Source: The State Council Economic Development Center

Table 6-1-12 Ratio of Bank Loan in the Fund Raising of Equipment Fund and Working Capital of SMEs in the Liaoning Province

	Number of answers	0%	30% or less	30%-50%	50-80%	80% or more
Equipment fund						
Total	157	70.1	8.3	6.4	6.4	8.9
State-owned	60	65.0	10.0	5.0	5.0	15.0
Collective	46	87.0	6.5	2.2	2.2	2.2
Private-owned & individual	419	68.4	10.5	10.5	5.3	5.3
Joint venture	8	62.5	12.5	0.0	12.5	12.5
Group	3	33.3	0.0	0.0	66.7	0.0
Others	21	57.1	4.8	19.0	9.5	9.5
Working capital						
Total	272	41.2	24.3	14.0	11.4	9.2
State-owned	120	36.7	26.7	9.2	13.3	14.2
Collective	64	50.0	21.9	15.6	6.3	6.3
Private-owned & individual	31	32.3	35.5	25.8	3.2	3.2
Joint venture	14	50.0	14.3	7.1	28.6	0.0
Group	5	0.0	20.0	40.0	0.0	40.0
Others	38	50.0	15.8	15.8	15.8	2.6

Source: The State Council Economy Development Center

6.1.12 Credit Guarantee Systems for SMEs

The credit guarantee systems for SMEs work in the major cities of China as experimental practices at present. Neither the system nor management of the credit guarantee systems is united in details in China. This is somewhat different from the practices of banks in China. According to the Peoples' Bank of China, the numbers of the credit guarantee funds might reach around 50 or more in the whole country, and the amount of the funds of these credit guarantee systems would exceed RMB 4 billion Yuan today. Generally, a credit guarantee fund could guarantee bank loans until by five times bigger than the amount of fund, the SMEs could borrow by RMB 120 million Yuan at maximum with full application of all credit guarantee system's credit. Because the credit guarantee fund is strict in the appraisal of the application, and requests in some case mortgage or guarantee money to SMEs, the enterprises those are accommodated with the credit guarantee services are still few. On the other hand, the probability of payment in subrogation by the guarantee fund is extremely low. Therefore, this system cannot be expected to contribute to the increase of the SMEs loan greatly. However, the credit guarantee system might provide a merit of another meaning for SMEs. That is, it may bring a good communication among three parties-the banks the administrations and SMEs.

The staffs of the guarantee fund are usually dispatched from administration concerned. Though they do not have sufficient skills and knowledge about corporate finance in the beginning, they can accomplish the business as the staffs of the partner banks cooperate with them. Therefore, they can learn through on the job training about corporate finance. Enterprises those apply to the credit guarantee service receive accommodating services of the staffs at the credit guarantee funds. Moreover, according to circumstances, these enterprises would obtain the consulting service from the guarantee funds. In China, the place in where the administrations, the banks, and SMEs can meet by the business is seldom found. The guarantee funds might be a valuable place in where communication and mutual understanding among parties concerned could be accommodated.

6.1.13 The Shenyang Credit Guarantee Fund (CGF)

The Shenyang Credit Guarantee Fund (hereafter called CGF), which commenced SME credit guarantee works in August 2000, is the representative public guarantee organization in the city. The CGF carries out its business with practical and reasonable method assisted by the technical cooperation of DFID of Britain. The Study Team takes note this organization, which would grow to be an excellent model of the credit guarantee fund of China in the near future.

The banks cooperate with CGF are counted for five banks including the China Construction Bank.

The CGF already completed appraisal of 50 to 60 member enterprises and gave guarantee to about 15 SMEs by the end of June 2001. As CGF requires counter guarantee from SMEs, enterprises must provide same borrowing conditions as bank loan. This means that only SMEs with capacity of almost passable to bank loan appraisal could get the guarantee of CGF. Therefore the positive impact of credit creation would be limited under the scheme existed, though CGF prepare favorable treatment in adoption of mortgage of leasing assets in particular.

The CGF must strengthen its capacity of appraisal as soon as possible and CGF eagerly hopes getting a chance of the training of this aspect. The profile of the CGF at the end of June 2001 is summarized as below.

Profile of the CGF

Status of the Organization:	A division-grade governmental non-profit institution under the Jurisdiction of Shenyang Economy & Trade Commission.
Size of Fund:	RMB 30 million Yuan (including 430.000 pound stealing grant from DFID of U.K.)
Partner banks contracted:	Shenyang City Commercial Bank、China Merchant Bank, FurXia Bank, Guandong Development Bank, China Construction Bank
Credit line:	Five times of the total fund amount (RMB 150 million Yuan)
Ceiling of guarantee per enterprise:	RMB 1 million Yuan
Counter guarantee:	Counter guarantee is required.
Guarantee charge:	Within 50% of the standard lending interest rate
Kind of loan:	Short-term loan
Allotment of financial risk:	CGF takes less than 70% and banks take more than 30%.
Beneficiaries:	Member enterprises qualified by CGF. Number of the members is 50 to 60 now. Member fee is charged.

Characteristics of CGF:

- (1) Specialists such as accountants, lawyers were recruited from non-governmental sector. This practice is quite seldom in China.
- (2) CGF consists of five departments as shown below. The specialists are in charge of plural departments to save numbers of skilled staffs of CGF.
- (3) DFID is dispatching a advisor for 3 years technical assistance.

Table 6-1-13 Organization and Job Assignment of Department of CGF

Name of department	Job assignment of department
1.General Affairs Dept.	General affairs, accounting, personnel affairs
2. Guarantee Business Dept.	Appraisal of SMEs and processing guarantee contracts
3. Credit Appraisal Dept.	Appraisal of counter guarantee mortgages
4. Risk management Dept.	Making contract documents and judicial affairs
5.Consulting & Service Dept.	Consulting services for members and public promotion of CGF. Management of the web site of CGF. URL: http://www.sy-cgf.com/

Source: Shenyang Credit Guarantee Fund

The Study Team executed the seminar for the staffs of CGF on the credit guarantee system of Japan on March 8, 2001. The staffs learnt about the difference between the Chinese practices and Japanese ones in detail based on the comparison analysis as summarized in Table 6-1-14. At the occasion, chief director of CGF indicated some problems of their system and practices as described below.

- It was a basic problem of CGF faced that the confidence level of the credit guarantee system was low because of the scale smallness of the fund of CGF and the insufficient provision of legislations concerned in China. The CGF had been trying and erring in the business for one year from the inauguration which afforded as a period of the study.
- The system had only one reception desk of CGF today, however CGF would request to partner banks to open reception desks to promote the credit guarantee system widely.
- Several credit guarantee funds at the ward and prefecture level would be established in 2001. These would be managed not by CGF but by private organizations.
- However, activities of CGF would be strengthened by the application of a credit guarantee service network, which would be developed by the collaboration of CGF and these centers.

Table 6-1-14 Comparison of Credit Guarantee Corporations of Japan and CGF

	Average of credit guarantee corporations of Japan	CGF
1. Fund (10,000 Yuan)	79,670	3,000
2. Reserve (10,000 Yuan)	109,945	0
3. Loan (10,000 Yuan)	531,058	0
4. Type of the organizations	Non-profit organization	Non-profit organization
5. Board of Directors	The board composed of persons from local governments,, financial institutions, economic groups and academies.	None
6. Numbers of staffs (persons)	119	10
7. Reception desk	Guarantee corporation, financial institutions, administrations and economic organizations.	CGF
8. Credit line	52 times of fund	5 times of fund
9. Amount of guarantee		
Maximum (10,000 Yuan)	357	100
Average (10,000 Yuan)	80	n.a.
10. Guarantee fee	Less than 1%	Within 50% of the standard interest rate
Revenue from the fee (10,000 Yuan)	47555	n.a.
11. Mortgage	Not required	Required
12. Risk sharing	100%	Less than 70%
13. Numbers of eligible SMEs	96,000	50-60
14. Rate of application		
In number of loan	72.2%	Negligible
In amount of loan	13.5%	Negligible
15. Payment in subrogation	1.9%	0%
16. Ground of confidence	National government	Local government
17. Legislations	Completed	Waiting the completion

Source: The JICA Study Team

Besides, the members of counter part trainee group of Shenyang City and Hanzhao City and the JICA Study Team visited the national federation of credit guarantee corporations (NFCGC) on December 11, 2000, and obtained a lot of information on the SMEs credit guarantee system and operation in Japan.

The NFCGC suggested that the following two aspects were fundamental factors of the credit guarantee system to work successfully. Those were, (1) large numbers rule should work; the

payment in subrogation rate could be stabilized in low order by the accommodation of a lot of SMEs. (2) Promise must be kept; the debt must be repaid by SMEs.

Followings are remarkable features of the credit guarantee system of Japan.

- (1) SMEs accommodated with the credit guarantee accounted for one third of all SMEs.
- (2) The amount of the guaranteed loan was 43 trillion yen (about RMB 3.3 trillion Yuan) as of March 2000. This was equivalent to 10% of the loan outstanding balance of all SMEs.
- (3) A credit guarantee corporation takes 100% of the financial risk, and no bank takes any financial risk at all.
- (4) The credit guarantee corporation makes contract of reinsurance on subrogation with the Japan small and medium-sized enterprises corporation, and 70-80% of payment in subrogation is covered by the insurance.
- (5) The mortgage is unnecessary in the general guarantee system. However, the mortgage is required in the special guarantee scheme for the larger amount of loan.
- (6) The ceiling amount of general guarantee scheme is \ 50 million per enterprise, and that of a special guarantee scheme is \ 450 million per enterprise.
- (7) The guarantee credit line can be theoretically expanded up to 60 times of the fund of each guarantee corporation.
- (8) Own earnings sustain the expenditure of the guarantee corporation by the guarantee premium.

Japan is only one country in the world where the guarantee organization is bearing the whole financial risk. The scheme of this in other countries is a mechanism that the guarantee organization and the bank allot the risk at an appropriate share. For instance, the credit guarantee system of Britain started in 1981 in which the allotment of risk between credit guarantee organization and bank had been 80% and 20%. However this was improved to the risk allotment of 70% and 30% later. And this risk allotment rate might be applied to CGF by the recommendation of the DFID. In general, it is appropriate to levy the risk taking on the bank like this.

Table 6-1-15 Transition of Credit Guarantee System of Table Britain

Phase	Period	Risk cover rate	Guarantee fee
I	1981.6 — 1984.5	80%	3.0%
II	1984.6 — 1984.12	70%	5.0%
III	1985.1 — 1986.3	70%	5.0%
IV	1986.4 — 1989.3	70%	2.5%
V	1989.4 — 1993.6	70%	2.5%
VI	1993.7 — today	70%(85%)	1.5%(0.5%)

Note : The allotment rate in parentheses is applied for credit guarantee for repeat clients

Source : Professor Kenji Kutsuna, Osaka City University

6.1.14 The City Government Plan of Expansion of SMEs Credit Guarantee System

The Shenyang Economy & Trade Commission is promoting the plan to enhance the credit guarantee system, based on the good start of CGF.

The plan aims at two directions which point to expansion of fund scale of existing credit guarantee funds on the one hand and point to new establishment of credit guarantee funds at the ward or prefecture level on the other hand.

(1) Expansion of the Fund Scale

According to the plan, CGF would merge the Private Enterprises Mortgage Fund of the Private Economy Development Commission to increase the fund of CGF. The fund scale of the Private Enterprises Mortgage Fund is very small today, but it would be expand to RMB 40 million Yuan by the end of 2001 according to the city government. The government anticipates equity investment by the private enterprises for the fundraising, however this idea would not be executed easily because of the uncertain profitability of the project.

(2) New Establishment of Credit Guarantee Funds at Ward or Prefecture Level

One credit guarantee fund was experimentally founded in the Dadong ward in September 2001. According to the initial plan, the city government would contribute RMB 2 million Yuan as prime water of the total scale of the RMB 15 million Yuan and the ward and private enterprises would contribute RMB 3 million Yuan and RMB 10 million Yuan respectively.

The government hopes to found same type of credit guarantee funds in several ward by the end of 2001, if possible. As the prospects of the projects are uncertain, the progress of the plan might be delayed.

6.1.15 SMEs Credit Guarantee Funds in Beijing and Shenzhen

The Study Team visited two SMEs credit guarantee funds those worked in Beijing and Shenzhen. Profiles of those are summarized hereunder.

(1) Beijing City High-tech Innovation Service Center

The guarantee fund being established by the Peking City Government has experiences for more than three years. The profile of the organization at the November 2000 is as shown below.

- Date of Establishment: Jun. 1998
- Size of Fund: RMB 100 million Yuan
- Banks: Unlimited
- Credit line: Three to five times of the total fund amount.
- Counter guarantee: Counter guarantee (technology, ownership of the guaranteed company) is required.
- Loan amount guaranteed: RMB 143 million Yuan guaranteed to 29 SMEs. RMB 0.6 million Yuan to RMB 10 million Yuan per SME.
- Recovery amount: RMB 23 million Yuan
- Rate of bad loan: 0%
- Note: Distribution of financial risk is arranged flexibly.
 - Projects promoted by banks : banks cover 60 to 80%
 - Projects promoted by the center : banks cover 10 to 20%
- Operation alliance: the Peking Trust and Investment Corp.

(2) Shenzhen High-tech Investment Company Limited

The corporation is a stock company to carry out credit guarantee business. It has five years experience with huge amount of guarantee. However the lower level of charge might bring hard business performance of this corporation. The profile of the business at November 2000 is shown below.

- Capital : RMB 400 million Yuan
- Banks : Unlimited
- Credit line : Three to five times of the total fund amount.
- Guarantee charge : 1 to 2 % of guaranteed amount.
- Loan amount guaranteed : Accumulated amount is RMB 3,100 million Yuan, amount outstanding is RMB 900 million Yuan .The company guarantees 200 enterprises (500 loans).
- Recovery amount : RMB 2,200 million Yuan
- Bad loan : RMB 22 million Yuan. Reserve for bad loan is calculated one percent of amount outstanding.
- Limit of guarantee : Limit of guarantee is 50% of net asset of guaranteed SME.

6.1.16 Problems of Indirect Finance for SMEs in Shenyang

The main problems of the SMEs finance are observed in following four sectors concerned, and are summarized as shown hereunder.

(1) Problems of Financial Institutions

The banks should develop the schemes by which can be accommodated the long-term capital demand of SMEs. Especially, this can be requested to the City Commercial Bank.

It is a problem that no local based Joint-equity commercial bank exists yet. Without bank of this type, it would be difficult to supply growth capital to local enterprises sufficiently, so that development speeds of those might be disturbed.

(2) Problems of SMEs Credit Guarantee System

The various problems of the credit guarantee funds such as scale of fund, amount of maximum guarantee, limited kind of fund, counter-guarantee system etc, may prevent to fill potential needs of SMEs. There is a problem that CGF does not contract with all banks in the city but with five partner banks. It is necessary to enhance as soon as possible a system of the credit guarantee that the needs of SMEs who have a development potential can be substantially accommodated with.

(3) Problems of Enterprises

The fund raising capacity of SMEs should be strengthened. First of all, it is necessary to do an internal restructuring of management to pass the appraisal of the banks or credit guarantee funds. A series of structural reform- cash base management, concentrating the management resources into promising divisions, withdraws from loss-making divisions etc- must be carried out at least to improve profitability being able to repay principal and interest on loan. Support measures to the SMEs restructuring is the most important one.

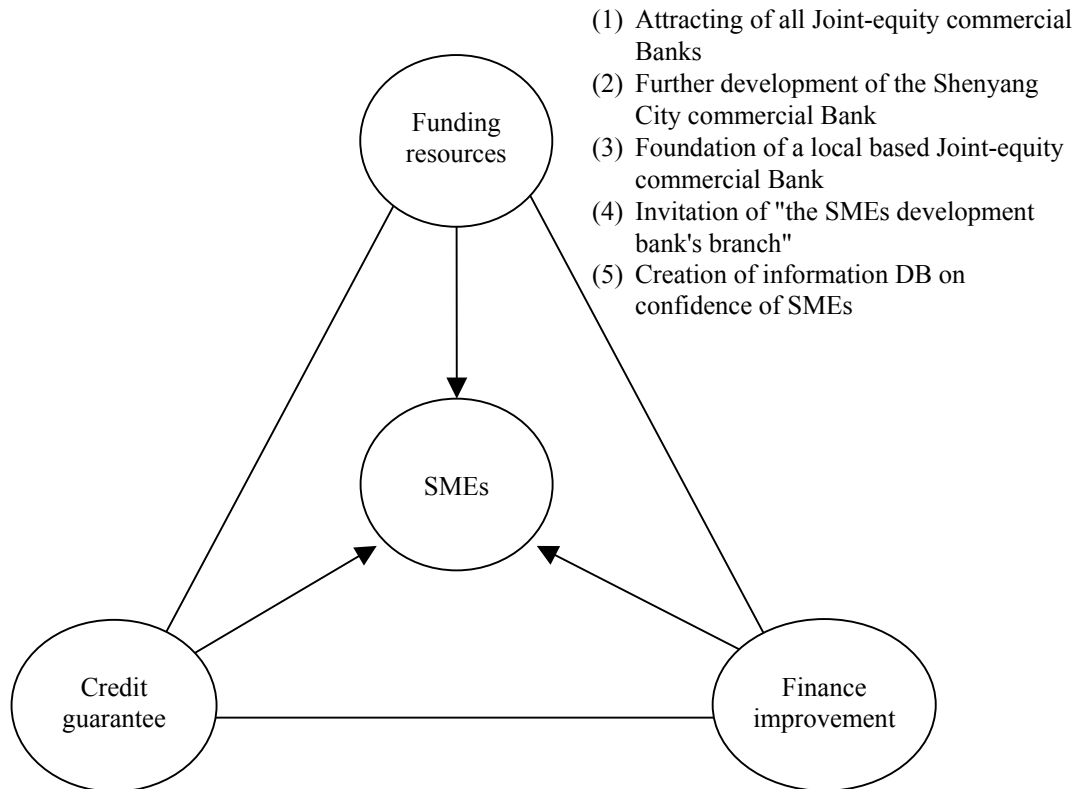
(4) Problems of Administrations

Neither the SMEs policy nor the support service of the administration is clear how to relate to the improvement of the SMEs financing now. It is indispensable to clarify the current state of “SMEs as the potential clients of bank loans” in order to reflect a financing support measure in the total frame of policy and support service appropriately. For instance, it is desirable to make statistic data of SMEs by adopting a classification as same as rating system of the financial institutions and to set up a financing support plan for SMEs based on such information analysis.

6.1.17 Considerations on Improvement of the SME Financing

A balanced development among three parties of financial institutions, credit guarantee funds and SMEs is an indispensable precondition for improvement of the SME financing.

The policy measures recommended are shown in Fig. 6-1-2.



- (1) Increase in number of the partner banks
- (2) Setting up of credit guarantee funds at prefecture level
- (3) Enlargement of the existing guarantee fund
- (4) Establishment of a reinsurance mechanism
- (5) Networking of credit guarantee centers of the region and whole country

- (1) Training for business planning
- (2) Introduction of an advanced financial restructuring strategy
- (3) Basic training for corporate finance improvement
- (4) Internet information services on corporate finance improvement
- (5) Internet information counseling & consulting

Source: JICA the Study Team

Fig. 6-1-2 Policy Measures for Easing SMEs Financing

6.2 Investment Funds

6.2.1 Present Situation and Problems of Investment Funds in Shenyang

(1) Significance to Develop Investment Funds

1) The definition of investment fund

In China the term of investment fund usually indicates both the stock investment fund (mutual fund) and private equity fund. Using the same term to express totally completely different funds always cause confusion in the country where financial knowledge does not diffuse.

The investment fund mentioning in this report is private equity funds to invest for stocks closed company's stocks. In Japan such investment funds are also called as Private Equity recently instead of using the term investment fund. Also the term of investment fund in this report is coincident with the term called industry investment fund that Chinese government examines to launch a law about which will be described later. In China it seems that mutual fund, an investment fund for stocks to be defined as stock investment fund and industry investment fund is to indicate private equity fund.

In addition, sometimes subsidies are also called fund in China, but these funds (subsidies) obviously have no relations with investment fund defined in this report. To avoid any confusion we will use the term Private Equity (PE) to describe investment funds in this report.

2) Types of private equity fund

Generally there are two types of private equity funds (Fig. 6-2-1), the first one is funds to acquire or invest existing companies or called buyout fund (BOF), and the second type is mainly to invest those new companies or business called venture capital (VC).

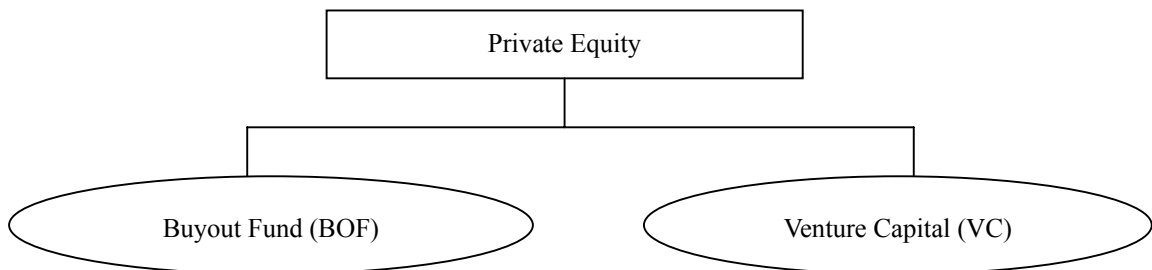


Fig. 6-2-1 Types of Private Equity

Some people say the venture capital should be indicated as a separate one as a result of the prosperity of venture business and venture capital in recent years, hence the term private equity mentions buyout funds only sometimes.

Invest targets of both buyout fund (BOF) and venture capital (VC) are stocks, convertible bonds, warrant bonds and other similar securities of closed companies, but differences of neither become clear too. A buyout fund is mainly to invest relatively companies with histories while a venture capital basically invests in a new business. Besides, a buyout fund invests more than 50% of target company's equity

aiming to mandate the company but a VC may only invest 30% or less and not demanding a controlling position in general.

Fig. 6-2-2 shows the coverage range of buyout fund and venture capital from a firm's growth cycle from establishment to continuation or revitalization.

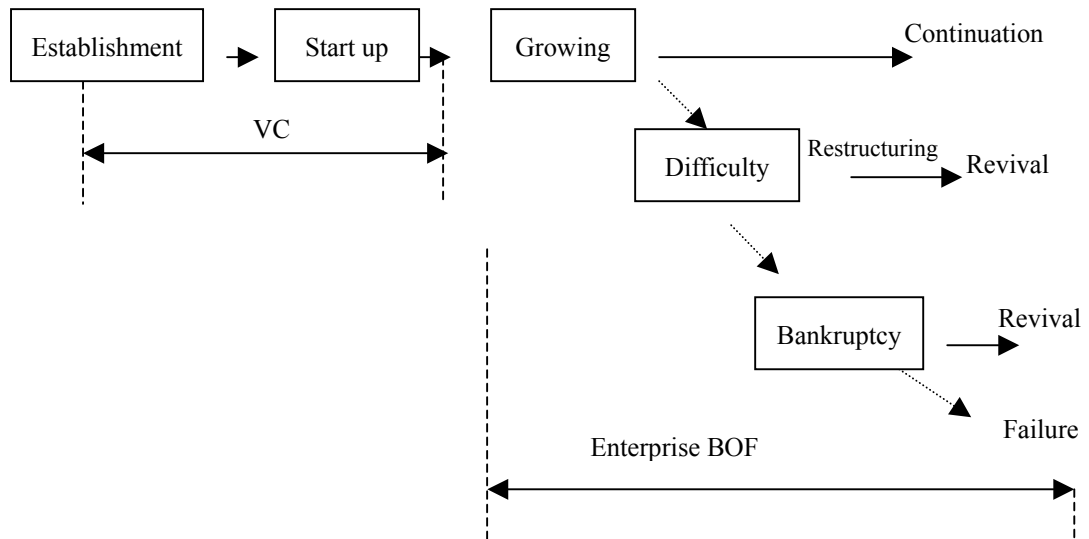


Fig. 6-2-2 Coverage Range of BOF and VC

3) Organization

In the United States, a state has sophisticated financial instrument, basic organization of private equity funds is a non-corporative limited partnership (LP, Fig. 6-2-3). At the same time there are incorporated management agencies running private equity funds as general partners (GP). A GP, also called a fund manager, usually sets several funds and invests in each by oneself.

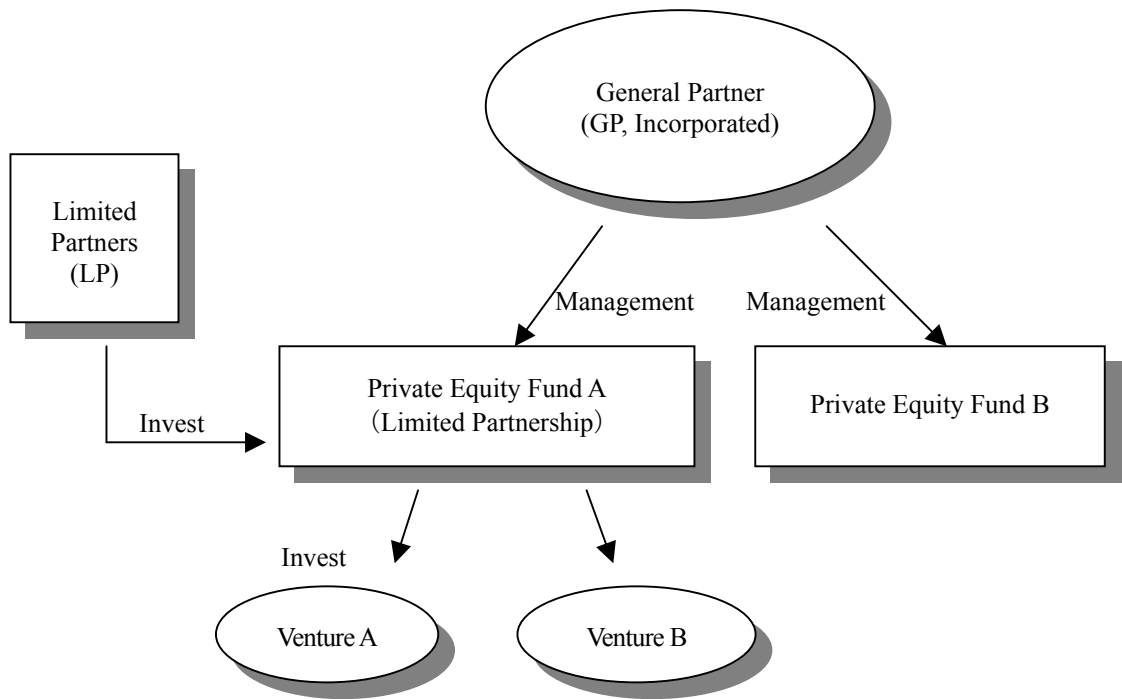


Fig. 6-2-3 Relations of Private Equity Fund

Though not definitely same, the limited partnership is quite similar with the “limited enterprise investment association.” in Japan. Because non-corporative private equity funds are tax-free, investors could avoid double taxation but could not enjoy exemption if the private equity.

On the other hand, the form of incorporation is the main organization of private equity funds in Japan. The reason is that the majority of private equity funds are venture capitals and those VC’s money comes from their parent companies but not investors outside the company; an incorporated subsidiary is convenient to control.

4) The importance of direct finance in Shenyang

a) A finance function

Many SMEs in Shenyang are starving for finance. We do not discuss this was resulted by bank’s credit crunch to SMEs or SMEs do not meet the lending criteria of banks. But it becomes a common understanding that direct finance should be promoted in China. As SMEs and venture businesses have to survive upon their original technologies and product planning ability, these companies may need relatively more money than large companies to develop their technologies or invest equipments. SMEs are unstable when there is a change of

economic environment and enriching direct finance means to boost stabilities and development of SMEs. In addition, it leads to a more balanced market with both direct finance and indirect finance. Traditionally in China people borrow money from their parents, relatives or friends personally when they want to start or expand their businesses. However this is a matter depends on coincidence without structured rules which may cause terrible troubles.

b) Reinforcement of corporate governance

In China, by historic reason, there are various company forms from old styled state-owned enterprises (SOE) and collective enterprises, with very unclear ownership usually, to stock limited corporations and limited corporations based on the corporation law. Transferring from SOE and collective corporations to so-called modern style corporations, limited corporation is an urgent task. In the process, it is essential to build a property valuation system for old companies, reinforce company's governance after transferring under stockholder's supervision and financial disclosure. Because private equity fund's character, a clear ownership will be its first propriety to invest, introducing of direct finance may lead the movement of reinforcement of corporate governance.

(2) Recent Movement of Investment Fund in China

1) A call for venture capital (VC) promotion

The investment fund business begins with promotion of venture capital (VC) in China. The history of Chinese venture capital (VC) business started in 80's when the state council approved the establishment of the first VC "Chinese New Technology Investment Corporation" in September of 1985. After that, many government offices and local government set up investment companies with characters of VC. All those companies were 100% government-owned (central or local) firms, and of cause these companies performed as typical state-owned companies. Although their investment policy were to invest high technology businesses, many of them rushed into real estate boom in early 90's, in addition to lack of operating know-how, most companies fell in financial difficulties and the failure of mentioned the first VC in 1998 indicated the end of first stage of VC in China.

In March of 1983, one of the constituent member, Min-Jian Central Committee (Democracy Building) of People's political consultative conference (an political organization similar with a Lower House in China) made a proposal at the lower house's general meeting saying "let us learn experience of foreign countries to

develop our venture capital soon” which caused a huge reaction in both government offices and public, and the proposal opened current venture boom. Furthermore, Chinese government promulgated “the decision about innovation reinforcement, development of high technology and industrial promotion” aiming to boost development high technology industry by national support in August 1999. In the “decision” a plan of preparation for direct finance market including venture capital (VC) was launched. State Council together with State Development Planning Commission (SDPC) and other ministries drafted “A few opinions about venture capital investment mechanism” in form of a notice afterwards (the details mention later).

There about 98 venture capitals / management companies at present in China as of November 2000 and it is said that the total registered capital reached about 8,300 million Yuan. Among them the representative venture capital was “China new technology SME fund” started in June 1999 run jointly by Ministry of Science and Technology and Ministry of Finance. The fund started to invest (either equity finance or lending) 1 billion Yuan annually from 1999 for three years to SMEs recommended by local government from 1999. In the year of 1999, there 1,200 projects successfully been financed and about 21% were state level R&D projects and “863” projects, 26% went to joint project by industry-university co-operation, 24% helped independence by researcher’s incorporating, and 10% financed overseas’ students who returned to China doing business. Besides receiving financial aid of the fund, those qualified companies had the privilege of getting bank loans with low interest rate from banks.

2) Law for private equities and venture capitals

There is not a law about private equity funds and venture capital funds in China, and the above-mentioned notice “A few opinions about venture capital investment mechanism” is the only official regulation currently. It is said that State Development Planning Commission (SDPC) with other ministries are discussing a guidance of “An tentative regulation on industrial investment fund.” According to the English newspaper “China Daily” dated February 26, 2001, China government recognizes the importance of investment fund and the preparation fro related law seems to be speed up that the government would submit a bill in the people representative meeting, a Chinese legislative body in May of 2001.

The contents of mentioned notice are as follows:

a) The investment body

The “notice” says, “the investment body means venture capital investment corporations and venture capital investment funds. Venture capital investment corporations should be limited companies or stock limited companies and other forms of operating organization should be discussed positively.” It is not clear the adoption of limited partnership will be discussed since the notice does not mention any words about the forms of venture capital itself.

b) Closed venture capital (VC)

The notice indicates clearly that a venture capital should be subscribed privately as a closed fund which means investors can not claim for redeem before the fund’s expiry.

c) Establishment and examination

There are no determined provisions about the establishment and examination for venture.

d) Subscription

Except the notice says that funds should be subscribed by private companies of personals when government does support but limits to limited commitment as general.

e) Possibility to invest total capitals

The notice says a fund could invest its total amount of paid-up capital which gives an exception for an article of “Corporation Law” that defines “a company must not invest more than 50% of its capital in other companies.”

f) Exit

The notice mentions the importance of establishing way of exit for venture capitals, especially indicates the establishment of new markets for venture businesses at Shanghai and Shenzhen’s stock exchange markets or listing at NASDAQ in the United States.

3) A problem of organization form

Under the China’s current law system, there is not a detailed regulation concerning private equity and venture capital expect above-mentioned notice of State Council.

Especially lack of determining on fund organization is the major problem. Currently the only way to run a fund is to incorporate. All three investment funds in Shenyang took the form of incorporation as limited corporations. In the situation that investment funds are hard to borrow money from banks, a fund's financial resource is limited to its paid-up capital but not by subscription from individual investors, a general way of raising money. Even if it is assumed that there are investors whom wish to invest, the investment goes to the investment fund or the firm itself but not the final venture business. In addition, if an investment firm (not fund) hopes to expand its capital, there is not a method except increasing the firm's paid-up capital itself what will be very complicated since there is not a concept of authorized capital and increasing a firm's capital almost meaning to register a new company.

Accordingly it becomes necessary to establish a partnership form of investment fund for private equity and venture capital.

4) Method of exit

Typical methods of exit include initial public offering (IPO), M&A and repurchase by stocks offering companies. Because buying stocks back by originally offered company cannot expect high returns, it may be not the major method of exit that investors willing to take. M&A depends on negotiations heavily, it is said M&A takes cost and time compared with the way of IPO. In addition, M&A can be in the stock market finally considering the situation that listing companies tends to merger a company by offering its stock (exchange) instead of cash. In another word, IPO is the major way of exit for investment funds.

Although there are two stock exchange markets, one in Shanghai and another in Shenzhen, both are markets for large-sized SOEs with high offering qualifications. But Chinese government has started to open a new stock exchange market for SMEs in 1999 which is called Chinese version of NASDAQ. The process has slowed down with the effect of the price declining on NASDAQ of the United States, the plan to establish the market within the year of 2001 seems ongoing.

According to Shenzhen stock exchange, the planned new market will be established in Shenzhen and they have finished preparations but waiting for the approval from China Securities Regulatory Commission (CSEC) and State Council. As the characteristic of the new market, the listing standard will be relaxed largely. For instance there will be no requirement of profit record for three years (now required) and net assets (total assets - liabilities) will be decreased to only 8 million Yuan.

Shenzhen stock exchange aims as many as 1,500-2,000 IPOs within two years of new market's establishment. But to avoid overheating, the stock exchange plans to list about 50 companies once from the beginning.

According to a major accounting firm in Beijing, there are 2,000 companies expecting IPO already.

(3) Investment Funds and Related Organizations in Shenyang

1) Investment funds

There are three venture capitals (VC) in Shenyang including one under preparation of establishment currently. As most VC in China, Shenyang's VC are mainly established by the science and technology commission or high technology development parks.

a) Shenyang Scientific and Technology Venture Capital Ltd.

Shenyang Scientific and Technology Venture Capital Ltd. is a company separated from Shenyang Scientific and Technology Venture Capital Center, a business unit under Shenyang Science and Technology Commission at the end of 2000. The company's capital is 40 million Yuan and Shinying Scientific and Technology Venture Capital Center is its largest shareholder. Shinying Scientific and Technology Venture Capital Center, established in 1995, was one of oldest VC in China and has invested in more than 50 companies totally with an annual amount of 10 million Yuan until the end of 2000. So far the method of exit was limited, the business unit exited its investment by repurchasing by invested companies.

Although Shenyang Scientific and Technology Venture Capital Ltd. is a new established company, the company determines to take risks positively to play as a major player in Shenyang's VC market. The company plans to employ ten venture capitalists and set a maximum amount of an investment to five million Yuan. Target investing companies are those growth-up companies and the term of one investment is estimated as three years. The company expects more than 30% return averagely on its investments. In addition, the VC decides to participate in the management of invested companies and make efforts in boosting venture businesses.

b) Liaoning Technology Venture Capital Co., Ltd.

Liaoning Technology Venture Capital Co., Ltd. was established by Liaoning Sciences and Technology Commission with a capital of 100 million Yuan, a largest VC at the end of 2000. Other than Liaoning government, it is said Dongbei University Alpine Electronics, a leading software venture in Northeast China also invested in the VC. The government of Liaoning Province schedules to increase the VC's capital to a 500 million Yuan in several years.

The company has not committed a real investment but still examining potential companies by its new employed team of venture capitalist.

c) Shenyang High-Tech Park Venture Capital Co., Ltd. (in preparation)

Shenyang High-Tech Park Venture Capital Co., Ltd., is prepared to be established within the Shenyang High-Tech Park with incubator facilities soon. Besides this company, the administration of the high-tech park plans to set up another VC "Liaoning Shenyang overseas scholar venture's garden" (for overseas student) together with "Shenyang new technology venture center", an incubator recently. Shenyang High-Tech Park Venture Capital Co., Ltd will propose to enterprises located inside of the high-tech park to set up the VC together reaching a 100 million Yuan capital level. Since there are numerous venture business in incubators of the park itself, the VC schedule to invest venture business inside the park first

2) The Role and development of the Shenyang Property Trading Center

Shenyang Property Trading Center's business is quite similar with an investment bank's M&A section, exchanging ownerships of firms. As the result of several years the agency has accumulated some knowledge and know-how in equity reorganizing which is not so diffusion in China. Therefore, the agency is considered most proper body to operate the state owned SME restructuring fund which will be described later.

(4) Private Equities in Other Areas

1) Beijing

Because Beijing is the area where universities and research institutes gathering, numbers of engineers and their quantity are highest in China. Zhongguan-cun area in Beijing is called China's Silicon Valley, and there are many new ventures becoming large companies like Legend. In addition, desires of researchers and engineers for

venture business are high. Thanks to the location in the country's capital, Beijing's companies have soon and much information about governmental subsidies. There are about 10 VCs in Beijing with an accumulated capital of 1,500 million Yuan including a VC invested by Beijing municipal administration. There is a venture capital association in Beijing in which not only VCs but also guarantee companies are members. The venture capital business in Beijing is under instruction of Beijing Science and Technology Commission.

2) Shenzhen

Most of citizens in Shenzhen are young since it is a quickly expanded new town from a small village. People desire for success the city does provide many business opportunities because of it is developing. In Shenzhen, one may feel less bureaucratic than other cities in China and government organizations are cooperative in promoting new things. Shenzhen municipal administration advocates a structure reform for the city's economy from assembling to more sophisticated high technology industry by construction of techno parks and inviting manufacturer's R&D centers. In addition, the local government invited several prestige universities in Beijing and other areas to open their substitutions in Shenzhen to strength the city's human resources.

Shenzhen, geographically near to Hong Kong, has the advantage to tap with new things and it has most advanced capital market in China. That was the reason that most of foreign VCs started their business in Shenzhen. In addition, it is a plus factor that there is a stock exchange in the city.

There are more than 10 VCs in Shenzhen operating an estimated amount of more than three billion Yuan altogether, the largest in China. The administrative organization of VC business is also Shenzhen Science and Technology Commission but barriers between government organizations are relatively low.

3) Shanghai

In recent years one of the most attracted area in China is the city of Shanghai. Historically Shanghai residents are good at business and the city's government is aggressive on developing new businesses. Shanghai is the place has highest percentage of foreign business which causes a shortage of experienced managers. The fact that Shanghai citizens tend to work as a senior manager instead of running ones own business is the weak point of the city. Some people say Shanghai is a proper place to start business for those from out of Shanghai by employing skilled

Shanghai managers. Shanghai is the financial center of China and Shanghai Stock Exchange is the largest exchange in China. There are numerous numbers of talented financial specialists in the city. Currently there are three or four VCs in Shanghai and the total capital of these VCs is estimated as 1 billion Yuan.

Meanwhile all VCs in above three cities are incorporated corporations.

4) Foreign VCs

In recent years many foreign VC began to watch business opportunities in China. Because the establishment of a VC is limited to incorporations and foreign companies are not allowed to playing business in financial sector, most foreign VCs opened their representative offices are concentrating in business finding instead. In case there is potential objective, the foreign VC may invest in it from abroad directly. Therefore foreign VC's scale is not very clear.

6.2.2 Difficulties in Promoting Investment Fund in Shenyang

Other than the necessity of investment fund related law preparation, it is also essential to enforce investment fund related services like accounting, auditing and regulations about disclosure

The authority must make policies and strategies from an investor's viewpoint. It is hard to consider there are many investors participating to a market with low return and high risks. A policy standing on investor's position is the policy based on fairness, openness and reducing of risks.

(1) The priority of Shenyang's Investment Fund Business

Between two types of investment fund, BOF and VC, BOF is much important in Shenyang at present by the following reasons:

1) Circumstances of Shenyang's numerous bad performing SOEs

a) Many SOE are facing difficulty

It is well known fact that many SOE in northeast China are facing difficulty to survive that may bring a big social problem. Table 6-2-1 shows the data of 293 companies provided by Shenyang Property Trading Center, an equity exchange broker.

Table 6-2-1 Data of Selling List of 1998

Total Assets of 293 companies	8,529,650,000	Yuan
Total Liabilities of 293 companies	7,395,400,000	Yuan
Net Value (book base)	1,134,240,000	Yuan
Net Value per company	29,110,000	Yuan
Numbers of Current Employees	118,438	
Numbers of Retired Employees	36,778	
Numbers of Total Employees	155,216	
Net Value per capita	7,308	Yuan
Average Employees per Company	530	

The total assets of 293 companies are a little over 8,500 million Yuan, and their accumulated debt ratio amounts to 87% (7,400/8,500). Here the real problem is the huge number of employees. The employee's per capita net worth (Assets – Debts) becomes merely 7,308 Yuan when divide the net value 1,130 million Yuan by the employee number of 155,000. Shenyang government's guideline of lump-sum payment for a retired employee over 65 years old is 15,000 Yuan and younger employee may higher. So if considering the expenses of dealing with employees, both currently working or retired, it is very clear that many companies are in a negative net worth situation.

Meanwhile all amount used here is book values without auditing or revaluation of assets. Bad assets including un-collectable account receivables, bad stocks and machineries without appreciation for years are considered occupy have a large part. According to an estimation of Shenyang Property Trading Center, total debt ratio of all state owned companies reaches as bad as 120%. The SOEs in county level may be suffering a more serious situation.

It is private company and company funded by a foreign firm that support high growth of China economy of late years. Specific gravity of a state company is high, and a growth rate is low when I watch a performance of various countries area economy, and the unemployment rate is high. In a private company and the area where a foreign capital advance was prosperous, these companies replaced a state company and hanged down economic growth and contributed to the employment simultaneously. However, there is not the sign that a private company grows in short term, and, in Shenyang city, it is it with an only trump rebuilding by restructuring of state ownership company oneself in the situation of a last year ratio minus induction of foreign credit for the time being.

In Shenyang city, it becomes urgent business in this sense to examine a measure of the establishment of an investment fund (phase encoding) in order to help restructuring of a state company.

b) Unclearness of Ownership

There are various types of companies in China. Before the “Open Door” policy launched in 1978, Chinese companies were distinguished by its founder’s status or ranking. State owned companies and collective companies were major forms of corporation. After the year of 1979, foreign company, limited company, stock limited company and individual company were increased but SOE and collective companies were still there.

There is not a comprehensive law system covering all these different companies began at different years. The result, one may spend half a day to listening a company’s history but gets confusion only.

The ownership of SOEs and collective companies are very unclear that caused a situation that no one is in the position and willing to take responsibility for SOEs and collective companies. How to expect these companies running well?

Chinese government has advocated a campaign aiming to transfer SOEs and collective companies into limited corporations in 1997. At the same time, the government instructed state owned banks to help large SOEs by a way of “Debt Equity Swap”. For small SOEs, the government encouraged individuals to purchase. However, selling of state owned SMEs brought many cases of corruption which made the central government to slow down the reform movement later.

In Shenyang, where SOE occupies largest percentage in China, how to transfer SOEs to limited corporations may be a more crucial, urgent problem than the promotion of venture business.

c) Difficulty to apply a bankruptcy

There is “bankruptcy law” executed in December 1986 (tentative) in China. However, cases of bankruptcy have been very rare till now. To avoid too frequent applications bankruptcy, Chinese government has been limited the numbers of company going to bankruptcy for years. One reason was many failed companies are state owned companies who have borrowing from state

owned banks. As most state owned banks suffer from a plenty of nonperforming loans, as high as 30% to 40% of their total lending some experts say, Chinese government does not want to burden these banks too much.

2) Environmental preparation for investment fund business

a) Accounting knowledge

As investment fund invest objective company's equity, analyzing financial reports becomes an essential ability for its employees. While the knowledge of accounting is the fundamental for the financial reports, it is found most senior managers in Shenyang lack the accounting knowledge. An accountant told a story that a company entry the investment by its employees as a loan when the company transferred from a SOE to a joint-stock corporation.

In detail, the administration can hold seminars promoting accounting knowledge to government officers and clerks, company managers and potential investors. Among accounting knowledge, since how to understand a balance sheet (BS) is considered more important, a six hour day seminar can largely cover the basic knowledge of BS. Of course for those who engaging in the business, they need more advanced skills and a one-day course is not enough.

b) The establishment of investment fund association

A desirable method of investment fund business is several investment funds invest one project jointly to reduce risks. By reaching this connections between every investment funds to share information are indispensable. An association can play the significant role in connecting investment funds. As investment fund business in China is at its beginning the lack of qualified specialist becomes a crucial problem. The association can boost knowledge level by holding seminars or publishing publications. In addition, investment fund business is a business largely relies on its employees, employees can communicate together through the association.

c) Necessity of independent way of exit

Besides IPO at proposed new market in Shenzhen, Shenyang should have its own way of exit for investment fund. For example prepare a database system of companies and individuals who are interested in purchasing a company. Because M&A is relative transaction, there might be various hurdles to

overcome, a database with useful information may shorten the negotiation process and make exchange of properties smoother.

d) Introducing the protection measure and incentives for investors

It is important to protecting investor's rights in starting private offering like BOF and VC. At present all VCs in Shenyang are established by government organizations. But to develop VC and other private equities, attracting individual investors will become the key of success. The measures are including information disclosure, measures when a fund is fail and treatment of corruptions and others. Tax incentives like tax deduction of carry back of loss, etc.

(2) Checklists for Operation of Investment Funds

a) Basic investment policy

- Investment policy
- Maximum numbers of investment
- Fields and Sectors to invest
- Growing stages of companies to invest
- Maximum amount for a single investment
- Standard of return expectation
- Enterprise scale of investment objects

b) Finding and electing of investment

- Establishment of decision-making system
Who takes the right of decision finally?
- Way of deal flow (roots, etc.)
- Business plan
Company summary, products and technology, markets, competition, marketing & sales, production, management style, organization, financials

c) Practice

- Due diligence
- Value evaluation of objective company
- Investment condition and contract contents

Articles of incorporation : Paid-up capital, Dividend, Liquidation preference, voting, conversion, anti-dilution, redemption, covenants

Stock purchase agreement: stock purchase declaration, closing procedure, representation and warranty, conditions of payment, right of first refusal, others

d) Participation in management

- Establishment of company governance system
- Constitution of board and various committees (executive committee, compensation committee, Audit committee)
- The agenda of board meeting
operating report, problem analysis upon result and business plan, cash flow
- Stock option plan
- Recruit of managers
- Restructuring
basic policy, financing, additional investment

e) Exit Strategy

- IPO
- Other way of exit and scheduling

6.3 Human Resources Development

As development of the potential of people working at SMEs will have a direct positive effect on the promotion of SMEs, the Study Team surveyed the current situation of SME support in the area of “human resources development and training” by the Shenyang Municipal Government in detail during the First Field Survey period. The findings of this survey were analyzed to clarify the current situation and the problems were identified, leading to recommendations to the municipal government.

The Second Field Survey mainly focused on the current situation of human resources development at enterprises and identification of the problems faced by enterprises. In addition, consultation activities were conducted, including the introduction of concrete human resources development measures to the relevant bodies in Shenyang.

6.3.1 Current Situation of Human Resources Development at SMEs in Shenyang

The general findings of the diagnosis of SMEs in Shenyang and the results of visits made to public and educational organizations involved in human resources development are outlined below.

(1) Current Situation of In-House Human Resources Development

- 1) In the case of new recruits, short training is provided at the beginning of employment at a company on the company rules, work rules and minimum level of operational skills required.
- 2) Following the above short training, no specific human resources development is actively conducted. With the absence of a long-term training program, ordinary workers and clerical staff do not give any impression of advancing their professional skills.
- 3) The top management is not particularly enthusiastic about human resources development, presumably because of wariness in regard to the high cost and likelihood of job-hopping after the completion of training.
- 4) Some enterprises organize study meetings using their own employees as lecturers, capitalizing on the experience of passing the ISO standards. However, such meetings are quickly suspended when the business shows a down turn.
- 5) Most enterprises make little effort in regard to human resources development based on the pretext that the necessary personnel can be recruited from the manpower market.
- 6) In general, SME owners are currently much more interested in the products and turnover of their enterprises rather than human resources development.
- 7) Although there are examples of successful business growth as a result of human resources development, most SMEs are unaware of these examples. There is not much enthusiasm to study the advantages of human resources development.

(2) Questionnaire Results (on Organization and Human Resources Development)

During the First Field Survey period, a questionnaire survey was conducted on 100 SMEs which were also the subjects of diagnosis. 70 SMEs were surveyed in the first phase and 30 SMEs were surveyed in the second phase. The findings relating to organization and human resources development are described below (see Table 6-3-1).

Table 6-3-1 Questionnaire Findings (Human Resources)

Question	First Phase 70 SMEs	Second Phase 30 SMEs	Total
(1) Currently Required Personnel (select two answers)			
1) Person with managerial ability	32	15	47
2) Person conversant with manufacturing technologies	14	7	21
3) Person with ability to develop technologies	45	22	67
4) Person with sales/marketing ability	36	16	52
(2) Problems Regarding Human Resources Development and Organization			
1) No clear plan for human resources development	28	14	42
2) Unclear distinction between guidance and training	18	6	24
3) Insufficient dialogue with employees	7	4	11
4) Insufficient understanding of employees	0	0	0
(3) Vision for Human Resources Development			
1) Active use of external training systems/schemes	16	7	23
2) Fostering of inspired and trusted leaders	24	8	32
3) Recruitment and training of staff to create business strategy	38	18	56
(4) Subjects for Further Learning as a SME Owner			
1) Leadership theory	15	7	22
2) Theory of business strategy	29	15	44
3) New management techniques	44	19	63
4) Business management examples of advanced enterprises in China and abroad	20	7	27
(5) Requests for Public Systems and Policies			
1) Would like to use a specialist human resources network	42	21	63
2) Policies to make local employment attractive are required to ensure the long service of employees	8	1	9
3) The accessibility to public personnel training systems/schemes should be improved	14	7	21

Analysis Results of Questionnaire Findings

In short, the analysis results of the questionnaire findings regarding organization and human resources development indicate insufficient awareness of the importance of conducting human resources development and organizational reform. This observation is illustrated by the fact that the number of responses to problems regarding human resources development and organization is relatively smaller than that for other questions. Some SMEs actually failed to answer this question (Question 2).

For the question on the required personnel, those who selected the most are “person with ability to develop technologies” and “person with sales/marketing ability”. The demand for “person with managerial ability” is also strong.

In the case of Question 4 regarding educational needs, it must be noted that the item “new management techniques” attracted an overwhelming response. What is important here is that “new” does not necessarily mean “the latest”. For SME owners, “new management techniques” include “things which they do not yet know” and “things which they want to learn”. This situation must be included in “educational needs”.

Another noticeable preference is shown for the “use of a specialist human resources network”. This indicates the necessity for the SME Support Information Network, which is currently being planned by the Shenyang Municipal Government, to include such a human resources network in its information service menu. What are crucial are the design of software which takes the registration items for the available human resources and the objectives of the network into careful consideration.

(3) Reasons for Low Awareness of Importance of Human Resources Development

During the First Field Survey period, the Study Team visited SMEs and also interviewed them for diagnosis purposes. As a result, the problem of low awareness of the importance of human resources development among SME owners was highlighted.

1) Insufficient Awareness of Importance of In-House Human Resources Development

As far as the institutional set-up for vocational training is concerned, the Government of China has enacted detailed laws and regulations relating to vocational training and the level of the education system is comparable to that of advanced countries.

The visits to SMEs, however, disclosed a surprisingly large gap between the institutional level and the real world. Awareness of the necessity for in-house education is still very low on the part of SMEs. Despite the considerable shortage of middle management personnel, there appears to be no systematic training of such personnel.

One reason for the shortage of such personnel in China is frequent job-hopping to other workplaces with better conditions because of the low level of loyalty to one’s own enterprise. The reason for the huge gap between the public education system and the real situation at enterprises is assumed to be the lingering effects of the centrally planned economy, resulting in enterprises believing it to be unnecessary to voluntarily conduct systematic in-house education and training.

The present practice of human resources development appears to be that administrative officials firstly formulate education/training programs and guide the employees of SMEs to undergo external, short group education courses held in a classroom. This training is called off-JT and is indeed an effective means of human resources development. However, the passive involvement of SMEs in this off-JT cannot be expected to achieve significant human resources development effects.

2) Insufficient OJT

The way in which the administration guides the employees of SMEs to undergo off-JT is not entirely free of problems. Some SME owners feel victimized by the demand to pay a fairly large training fee.

It is unnecessary to say that the entrustment of human resources development to external bodies is an effective means of such development. Given the limited scope of vocational education in society to off-JT, however, in-house education/training is also necessary.

In general, education for the employed can be provided in two ways, i.e. off-JT and OJT. Off-JT means the teaching of the knowledge and skills which are common to a specific vocation by means of group education/training and other methods while OJT means the teaching on the shop floor of the specific knowledge and skills which are inherent to a specific type of work. These two are mutually complementary and the lack of one aspect means failure to foster suitably equipped workers. It must be noted that off-JT can be conducted in-house.

At present, there is no strong evidence that most SMEs in Shenyang are voluntarily and systematically implementing OJT. There appears to be a passive attitude that an employee education program should be formulated by the municipal government and that SME owners should simply follow the instructions of the municipal government as used to be the case in the period of a planned economy. Moreover, because of the unfavorable business performance, many SME owners would like to divert the funds for human resources development, if available, to other purposes.

3) OJT and Off-JT Required Prior to Equipment Renewal

The municipal government should provide guidance to urge SMEs to conduct systematic OJT. For example, successful examples of human resources development in China and abroad can be introduced as a part of such guidance although this hardly appears to have been conducted so far.

The current situation observed by the Study Team is described next. When the production control and manufacturing technologies are observed at the factories of SMEs in Shenyang, it is apparent that the local technological level lags behind that of enterprises in advanced countries. What is crucial here is that as local workers are unaware of the technological level in advanced countries, they do not know that they lag behind. What they understand is that any renewal of the fairly aged production

equipment at their places of work will considerably improve the productivity and quality.

Nevertheless, such a considerable improvement of the productivity and quality cannot take place despite equipment renewal unless the level of the production control and manufacturing technologies shows marked improvement. Progress in terms of quality control, production control and manufacturing technologies is an essential condition prior to the renewal of equipment. An educational system to achieve such progress through a combination of OJT and off-JT is what is most urgently required for SMEs in Shenyang at present.

4) Future Tasks

There is no doubt that fundamental reform of the production performance of SMEs can be achieved in a few years if both the municipal government and SMEs cooperate with each other to create an effective education system which combines OJT and off-JT.

Shenyang is a leading heavy industrial city in China and has many SMEs in various manufacturing sub-sectors. Even though increasing attention is being placed on private high-tech enterprises in Shenyang, science and technology-based private enterprises alone in the computer and other industries cannot lead Shenyang's economy. In reality, improvement of the business performance of manufacturing enterprises, which are the most numerous enterprises in Shenyang, will have the strongest impact on the promotion of SMEs.

If the manufacturing technologies and quality control, etc. in Shenyang can reach a satisfactory level for enterprises of advanced countries, the city's relatively low labor cost will be an attractive feature for these enterprises to invest in Shenyang. With the increased procurement of parts from local manufacturers by these enterprises, Shenyang's status as a global production base will become a reality.

While there is no short cut to success, the active learning of production control techniques and manufacturing technologies from advanced enterprises will gradually improve the local technological level. Such learning of technologies and skills, however, can hardly be achieved by simply relying on classroom teaching and OJT at the production floor by advanced engineers is essential.

6.3.2 Current Situation of Support by Municipal Government for Human Resources Development

The study findings on the current situation of support by the Shenyang Municipal Government for human resources development by SMEs are described next. The Study Team visited many administrative and educational bodies related to support for human resources development and located in Shenyang. Based on the findings of these visits, the current situation and pending tasks are outlined first.

(1) Current Level of Support for Human Resources Development of SMEs

In short, the municipal SME promotion measures to support human resources development are still inadequate. The available measures are management training for large state enterprises and assistance for the unemployed to find new jobs and human resources development of SMEs is not yet fully included in the scope of assistance.

The Shenyang Municipal Committee of the Communist Party of China recently issued a notice entitled “Decision Regarding Major Development of Private Sector Economy”. This notice has a section called “Support in Human Resources Aspect” which is clearly related to support for human resources development and its contents are listed below for reference purposes.

- 1) Private enterprises are exempt from the payment of a training fee to a school when they recruit from the said school.
- 2) Specialist engineers working for private enterprises may apply to sit a technical qualification examination as in the case of engineers working for state enterprises.
- 3) When staff members of private enterprises are recruited by a state enterprise or government organization, their length of service at a private enterprise is considered as their length of service at the new place of work.
- 4) When engineers from abroad or other cities are invited to work, personnel recruitment rules similar to those of state enterprises shall apply.
- 5) Managers and engineers which are certified as having made a special contribution to their place of work may change the family registration of their spouses and children from the rural register to the non-rural register or even the urban register if applicable.
- 6) Investors from other cities which have invested a certain amount in Shenyang and their spouses may receive Shenyang residency status.

- 7) When staff members of government organizations move to management positions or become the owner of a private enterprise, documents certifying their status as a government employee will be kept for a period of three years.
- 8) When executives of state enterprises are temporarily assigned to positions at private organizations, they may apply to sit the specialist engineer examination.

The following comments are made on this “Support in Human Resources Aspect”:

Of the eight support measures listed above, two are related to improvement of the family registration conditions while the remaining six are related to improvement of the employee treatment at private enterprises. In short, they are intended to provide development opportunities for private enterprises by eliminating differences between private and state enterprises in terms of the treatment of employees and are all obviously necessary. As it has taken some time for China to shift from a planned economy to a market economy, it is necessary for the municipal government to formulate concrete human resources development support measures from a much wider perspective than has previously been the case.

(2) Reasons for Insufficient Measures to Support Human Resources Development by SMEs

The support measures of the municipal government for human resources development have yet to be properly organized. The reasons for the insufficient human resources development measures for SMEs of the municipal government were analyzed and are outlined below.

- 1) In the last three years, the municipal government has been fully preoccupied with support for the training of factory management and accounting staff members because of the need to rebuild the business management of large state enterprises and has been unable to provide support for SMEs.
- 2) The government budget for the promotion of businesses is currently directed towards large state enterprises. In fact, a similar budget for the promotion of SMEs has hardly been provided.
- 3) When a SME is neither owned by the state nor a collective, there is limit to the available administrative support. In reality, there is virtually no system to support these SMEs.
- 4) There is a lack of awareness on the part of administrative officials and other related persons that SMEs do not have in-house training facilities such as those owned by large enterprises.

- 5) Even though the available supply of personnel who are really required by SMEs is limited, some officials simply believe that it should be enough for SMEs to recruit such personnel from the manpower market.
- 6) Some officials appear to believe that human resources development is costly and is wasteful because of the possibility of quick job-hopping.

(3) Current Situation of Human Resources Development Measures for Enterprises

The municipal government has not yet fully developed support measures for human resources development by SMEs. However, there are some support measures which can be applied to SMEs and these are outlined below:

- 1) It has recently become a compulsory requirement for the managers and other employees of enterprises to undergo short training courses with a view to obtaining a certificate of qualification for their relevant jobs in order to upgrade the skill level of all employees.
 - a) Examples of such courses: legal affairs, accounting, statistics, taxation, planning, work safety, water supply engineer and electrical engineer
 - b) Most courses are short and consist of classroom teaching. Some involve the training of operation skills.
 - c) The course fee is entirely paid by either the enterprise or the trainee.
- 2) The Productivity Promotion Center provides a payable consultation service for manufacturing enterprises to obtain international ISO standard certification. As part of this service, guidance is provided on human resources development.
- 3) Measures designed to support the training of engineers include reduction of the course attendance fee by 50% for those enterprises with a poor business performance when the engineers of these enterprises undergo technical training at the International Academy of Science and Technology.
- 4) A partial measure to support the fee-paying training of SME managers is currently implemented.

Based on the present situation of human resources development in Shenyang described in (1) through (3) above, the pending tasks for human resources development support

measures of the Shenyang Municipal Government for the promotion of SMEs are discussed in (4) and (5) next.

(4) OJT Support Measures as Future Task

In line with the state policy, the Shenyang Municipal Government has recently introduced the human resources development support measure of demanding that enterprises send their managers and other employees to short training courses with a view to obtaining a certificate of qualification for their relevant jobs in order to upgrade the skill level of all employees.

If this measure is properly implemented, the financial and administrative burden on the municipal government is likely to become fairly heavy. This support is, however, provided for off-JT and this measure alone will not develop the human resources of SMEs. Guidance on OJT is also required as off-JT and OJT are two sides of the same coin.

At present, there is no strong evidence that most SMEs in Shenyang are voluntarily and systematically implementing OJT. There appears to be a passive attitude that an employee education program should be formulated by the municipal government and that SME owners should simply follow the instructions of the municipal government as used to be the case in the period of a planned economy.

In the meantime, successful enterprises are voluntarily and systematically implementing OJT without exception. What is important for enterprises is expansion of the scale of business in an assured manner. This will produce “a surplus” for the recruitment and fostering of capable personnel. In reality, however, capable personnel are required to seize business opportunities even when the business scale is too small to produce such a surplus (in terms of funds and the leader’s ability). This means that human resources must be systematically developed at a time when a surplus is unavailable. Many successful business owners unanimously testify that human resources development is the only way to beat the competition.

Accordingly, the most urgent task for the municipal government is improvement of the awareness of SME owners of the need for voluntary in-house education/training. The first step is the introduction of successful examples to as many SME owners as possible to make them recognize “the need for voluntary and systematic human resources development”.

If the successful examples which are cited are provided by foreign subsidiaries or private companies, some managers of state enterprise may refuse to accept them at face value on the grounds that different business conditions are involved. Nevertheless, a proper response to a market economy cannot be achieved if the top management of any enterprise clings to different conditions as a reason for maintaining the status quo.

(5) Systematic Educational Program as Future Task

In the case of off-JT and OJT, the intended educational effects are difficult to achieve unless two types of mutually linked training are systematically conducted. Otherwise, omissions and duplications could occur in regard to the teaching contents. These prospects can also be understood by learning “the personnel management” described next.

Advanced planning is an important factor for education. In the case of human resources development featuring top and middle management, a comprehensive and systematic educational program is essential. As these managers must have a proper understanding of all aspects of business management in view of their positions, they should not only have knowledge of business management, financial management, production control and computers but also understand “personnel management” in order to motivate the work morale of employees and others. Business owners are required to guide their subordinates by making quick decisions on the daily problems of business management and it is not sufficient for them to partially learn these subjects.

The municipal government should, therefore, formulate a systematic program to implement comprehensive education and training. To promote the efficient development of the human resources of SMEs within the constraints of time and budget, a truly systematic educational program must be formulated which takes the actual educational needs into consideration.

Dongbei University and Liaoning University situated in Shenyang currently use American MBA textbooks with little alteration for the education and training of top management. As the contents of these textbooks are intended for large enterprises, however, they are unsuitable for SMEs. The municipal government must consider the options of either finding more appropriate textbooks for SMEs or preparing new textbooks.

In addition to such textbooks, “SME support measures” and “company diagnosis” should be introduced as teaching subjects in view of the proper understanding and utilization by SMEs of the SME support measures of the municipal government.

Using the same curriculum, SME experts should be trained to act as consultants for SMEs. They must fully understand the needs of SMEs and should act as communicators between the administration and SMEs.

The presence of such SME experts is socially required to make the best of the municipal SME promotion measures and to improve the business performance of SMEs through the careful improvement of business management.

Refer to the relevant recommendations for the municipal government attached to this Report for the concrete processes to formulate a systematic educational program and for the training of SME experts.

6.3.3 Job Market and Problem of Human Resources Shortage

It is often said that the human resources required by enterprises can be supplied by the job market. The reality of the manpower market is described in this section.

(1) Outline of Job Market

The job market is, in fact, an organization. Formerly, there was a division of work in that the introduction of jobs for ordinary workers was conducted through the manpower center controlled by the Labor Department of the municipal government while the introduction of jobs for high class workers, such as management executives and engineers, was conducted through the manpower center of the Personnel Department of the municipal government. Today, however, job introduction is conducted through the manpower market for all types of workers. This manpower market actually has two names, i.e. the Shenyang Municipal Manpower Exchange Center and the Shenyang Job Market in China. However, they are the same body from the management point of view. This center is a state class job market jointly funded by the State Personnel Department and the Shenyang Municipal Government in 1994. Since it's opening, the center has firstly been consolidating its operation in Shenyang and plans to extend its manpower exchange service to the northeastern region with intended knock-on effects nationwide. Ultimately, it is also planning to operate internationally.

The center gathers information on human resources not only in Shenyang but also in the northeastern region using a computer network and exchanges such information with seven other state-level regional manpower markets. For example, it shares information on entrepreneurs (business executives and managers) with the job markets in Tianjin, Shanghai, Tangshan and Chongqing, etc.

(2) Reality of Information Exchange on Human Resources with Other Regions

One example of the introduction of human resources in the entrepreneur market is of an official of the Fujian Provincial Government recently bringing representatives of 150 SMEs in Fujian Province to the center in Shenyang using information obtained from the wide area human resources network. Each visiting SME plans to recruit several managers and engineers.

(3) Registration and Job Introduction Mechanisms of the Center

1) Job Exchange Market (Traditional Introduction System)

According to this system, opportunities are arranged for meetings of prospective employers and employees in view of job introduction. These meetings take place every Wednesday and Saturday. Each prospective employer is given a small booth in which interviews can be conducted. Applicants obtain the conditions of employment and other information through the mass media and other routes and purchase an admission ticket to the center at RMB 3. They can directly negotiate with prospective employers without advance registration.

2) Intangible Market (Computer Registration and Introduction)

The word “intangible” means that an applicant can obtain job information without actually visiting the center. He or she submits a personal history to the center for input to the computer by a center official to complete the registration process.

Registration is free. Those in charge of recruitment at enterprises can retrieve the registered manpower information from the computer at the center. By paying a monthly fee of RMB 280, enterprises looking for new recruits can retrieve a list of 60 job applicants any number of times and can also put up a recruitment notice in the center. Job applicants are informed of interest by the center after registration. They can also visit the center to check recruitment notices or to purchase a recruitment leaflet at a cost of RMB 1.

(4) Excessive Competition and Shortage of Human Resources in Manpower Markets

While 1.2 million job vacancies were advertised in 1999, only 20 – 25% of these positions were filled because of the shortage of human resources truly required by enterprises.

Meanwhile, the competition between the job markets is becoming ever harsher. There are two other job markets in Shenyang, which are on the same level as the center. In addition, 20 smaller government-affiliated job markets (centers) also exist. Coupled with more than 40 privately run job centers, 60 to 70 job centers are currently in operation in Shenyang.

These job centers are competing with each other to gain access to the limited human resources and this situation can be described as wasteful. Each center actively advertises for job applicants by indicating the type of work, required length of past experience and age, etc. but the level of registration by job seekers is lower than hoped for. One reason for this may be that job seekers are less than enthusiastic to register in Shenyang because of the generally low wage level in the city compared to other areas of China.

(5) Types of Human Resources in Short Supply

The types of human resources which are particularly in short supply at present are business managers (so-called entrepreneurs in Chinese) and specialist engineers. There is a shortage of management personnel capable of performing business management of an international standard, of properly using a computer and of speaking a foreign language.

A shortage of high class engineers is acutely felt in the fields of biotechnologies, pharmaceutical technologies, water conservation technologies, modern agricultural technologies, high-tech and construction technologies (structural science, dynamics and urban construction). Lawyers conversant with international litigation and economic affairs are also in short supply.

In the case of ordinary workers, there is a shortage of workers who can meet the skill requirements of the municipal government, i.e. those who can at least obtain “a certificate of vocational qualification”.

From the viewpoint of society in general in Shenyang, there is a definite shortage of people with a post-graduate degree. Banks are also experiencing a staff shortage as those with a high academic degree and experience in international banking are flowing out of Shenyang to other areas. For example, a person receiving a monthly salary of RMB

2,000 at the international operation section of a bank in Shenyang can earn RMB 5,000 at the Guangdong Development Bank. For the same reason, high-class personnel in the field of security management are moving out of Shenyang to Shanghai and Shenzhen.

6.3.4 Examples and Contents of Human Resources Development in Shenyang

Some examples of human resources development in Shenyang are introduced here without restricting the scope to SMEs.

(1) Human Resources Development at Liaoning University

1) Training of Executives of State Enterprises (Based on State Policy)

- a) Targets and frequency : Factory managers and chief accountants; 12 courses in three years; total of 700 trainees
- b) Training bodies : School of Industrial and Commercial Management of Liaoning University; Economic Management Executives Training Center of the Municipal Economic and Trade Commission
- c) Period and number of: Three months outside the place of employment; trainees average of 60 trainees per course
- d) Training contents : - Theoretical training (on the following MBA subjects)
Theory of managed economy; economic law; corporate finance; book-keeping; international finance and trade; management of corporate strategy; production control; marketing; theory of market economy; method and significance of corporate guidance; theory of company diagnosis
- Practical training (training to solve immediate problems)
* The training fee is mainly borne by the central government but is partly payable by enterprises

2) Example of Training for SMEs

- a) Targets and frequency : Top and middle management personnel of private enterprises and joint ventures (only a small number of

participating enterprises)

- b) Training bodies : School of Industrial and Commercial Management of Liaoning University
- c) Period : Several weeks to one month; lecturers of the school visit applying enterprises
- d) Training contents : Marketing; sales operation; method and significance of business management; company diagnosis and planning

* MBA Course: some SMEs send their employees to the two-year MBA course during the holidays. The fees for d) above and for the MBA Course are entirely payable by enterprises.

(2) Training of Scientists and Engineers (International Science and Technology Institute)

- 1) Scientists : Computers (3,000 trainees for financial management); foreign languages; numerical control (200 trainees); agricultural technology; automation (360 trainees)
 - Total number of trainees so far: more than 10,000
- 2) Managers : Scientific research projects; management of scientific research body; patent management; management of scientific and technological development results
 - 2,000 trainees a year for the above subjects
 - 4,000 – 5,000 trainees in two years on financial management

The training period for the above courses and the fee range from one to three months and RMB 200 to RMB 400 respectively. The fee is halved for enterprises with poor business results.

(3) Vocational Training School (School of Vocational Training of Shenyang University)

- 1) Specialist subjects : Machine automation; industrial electrical automation; applied use of computers and repair; computers for accounting; stock investment; secretarial; hotel management
- 2) Number of students : A total of some 2,000 for the above seven subjects
- 3) Period : Three years based on four hours a day
- 4) Characteristics : High proportion of practical learning which takes place at actual workplaces in addition to classroom learning
- 5) Subjects with large number of students : Computers for accounting; stock investment; hotel management

- 6) Subject with high : Machine automation; hotel management; stock investment employment results
- 7) Fee : Average of RMB 4,000 a year

Note: Number of vocational training schools in Shenyang

- a) Technical colleges: 95 (state-level priority colleges: 9)
- b) Ordinary secondary vocational schools: 48
- c) Vocational high schools (including special secondary vocational schools): 103

6.3.5 Training for Re-Employment and Academic Career Education

The Shenyang Municipal Government allocates a large budget for training for re-employment and academic career education (adult education) for those who have lost their job with a large state enterprise. Academic career education (adult education) means the re-education of those who have no suitable qualification, i.e. academic career equivalent to three year technical college education, required by executives of the state.

(1) Contents and Scale of Three Major Training Courses at Shenyang Vocational Training School

- 1) Academic career upgrading training: to provide university-level education for those who do not have a university degree
- 2) Job seeker training (training on social adaptability): teaching of knowledge and vocational skills to adapt to society
- 3) Professional skill training: training for the re-employment of surplus personnel from state enterprises

* School size: building floor area of 4,000 m², of which 2,000 m² is used for training purposes.

(2) Types and Contents of Training Courses

1) Academic Career Upgrading Training (Adult Training)

A branch of Dongbei University has been established in cooperation with the adult education body of Dongbei University. Four years academic career upgrading education is provided for those who have lacked the opportunity to attend university in the past. A total of 108 students are enrolled on this course and are learning computing and accounting in addition to other subjects. The course aims at training personnel with high skills.

2) Job Seeker Training (Training on Social Adaptability)

a) Types of Training

There is a total of 21 training courses with the training period ranging from one month to three months.

Examples of training courses: air-conditioning and refrigerating technologies; computer software operation; garment design; dress-making; handicraft accessories; marketing and sales techniques; handicrafts (fabric); foot massage; Chinese cooking; bread and cake-making; hairdressing; barbering; audio product repair; automobile repair; car driving; interior design; electrical work; elementary English; elementary Japanese

* The school provides the nine courses underlined above.

b) Number of Trainees

Since the commencement of training in 1998, the total number of trainees has reached 20,000. For the present year, 6,000 trainees are registered.

c) Training Contents

In the case of computer software operation for example, the trainees learn how to connect to the Internet, send e-mails and use the word processing software in Chinese, Office 97 and 2000 and Windows 97 and 2000, etc.

d) Training Effects

Those trainees who have completed a course and passed the completion test are awarded a certificate of elementary skill as well as a certificate of course completion by the Labor Bureau. The re-employment rate is approximately 60%.

The training course with the best employment rate is the marketing and sales techniques course although the number of applicants for this course is the smallest. The course with the highest number of applicants is the computer software operation course although the employment rate of those completing this course is the lowest. Many people appear to opt for this course in an effort not to be left behind the trend of the time. However, as people with one months training on computer operation cannot add extra strength to an enterprise, they are not serious targets for recruitment.

e) Course Fee

The course fee for job seeker training courses varies from one course to another with an average level of RMB 300 for one month. Those who are made redundant as surplus workers by state enterprises and who are seeking re-employment are fully exempt from the course fee.

f) Teaching Staff

There are 14 people in managerial positions and 35 teachers conducting vocational education. These 35 teachers have been recruited in Shenyang as experts on the relevant subjects and include some part-time teachers. The number of teachers has been controlled so that the school's personnel cost can be paid within the municipal budget for personnel cost.

g) Textbooks

Some textbooks are those used by the Ministry of Labor while others are prepared by the school. Some are of an intermediate level.

3) Professional Skill Training

As this course aims at facilitating the re-employment of surplus workers from state enterprises, trainees receive a living allowance of RMB 270/month during the training period in addition to free training.

The training curriculum is similar to that for job seeker training but the trainees must undergo a 15-day course entitled "job awareness training" prior to commencing the actual training.

The re-employment rate is 60 – 70% in accordance with the instruction by the government to achieve such a level.

(3) Entrepreneur Fostering Education

The school also provides entrepreneur fostering education so that those who have lost their jobs at state enterprises can return to society. The curriculum consists of basic theories for business establishment, visits to newly established enterprises and lectures by those who have established their businesses in the first one to two months. The trainees are then divided into groups to start their new businesses. The school provides guidance and support to solve any problems and also conducts a follow-up survey. There are many

people who have completed this course who are now running successful businesses in the fields of services, electrical work and household electrical appliance repair, etc.

(4) Municipal Vocational Schools

While the Shenyang Vocational Training School is the only school directly controlled by the Department of Labor, there are 13 other schools in the urban and suburban areas of Shenyang which provide similar training. In addition, there are 192 schools providing job seeker training, 30 of which are also entrusted to re-train those who have lost their jobs because of the restructuring of state enterprises.

6.3.6 Joint Human Resources Development for SMEs by Industrial and Academic Circles

A recent unique attempt by Shenyang University entitled “New Approach to Human Resources Development for SMEs” is described here.

(1) Involvement of Shenyang University in Local Economy

Since its establishment, Shenyang University has been trying to manage itself based on educational programs designed to train graduates to meet social needs and to produce human resources which are useful for local enterprises in order to assist the economic development of Shenyang. 80% of the 10,600 students are local students and some 2,000 graduates a year mainly find employment in Shenyang.

(2) Joint Human Resources Development for SMEs by Industrial and Academic Circles

In the last few years, more than 60% of graduates have found employment at large or medium-size state enterprises or foreign subsidiaries. Under these circumstances, joint human resources development with industries commenced in 1997, producing human resources to meet the needs of SMEs.

This educational drive started when an accounting manager of a China-US joint venture visited the university to train personnel to meet the needs of enterprises in view of the difficulty of recruiting such personnel. Under this joint human resources development scheme, the university and enterprises collaborate to clarify the corporate needs for human resources and the required number of personnel, formulate training courses to meet these needs and invite applicants for these courses.

Of the four years study at the university, the final year is spent at a specific enterprise as a practical training base to consolidate the prospects of successful job applications for graduates. The teachers also visit the enterprises to provide the students with on-site guidance while engineers of the enterprises are invited to the university as external lecturers.

(3) Results of Joint Human Resources Development in Last Three Years

Almost three years have passed since this joint human resources development scheme commenced and the following results have been achieved. Firstly, 30 enterprises have participated in the scheme and some 300 students have found employment. The scale of these enterprises is generally 100 – 300 in terms of employees. However, Golden Cup Automobile, which is well known in Shenyang, is also a participating enterprise.

By types of business, many of these 30 enterprises are in the fields of telecommunication materials, chemicals, pharmaceuticals, construction, automobiles, automation and machinery. By type of ownership, foreign subsidiaries, small state enterprises and private enterprises account for roughly one-third each.

There has been a marked increase of the need for joint human resources development in 2000 and negotiations are in progress with nearly 500 enterprises. The leading types of businesses showing interest in the scheme are electronic information, automation and machinery businesses. The fee for this one-year training course is borne by the university.

6.3.7 Human Resources Development Issues and Improvement Measures

To conclude the section on “human resources development”, the reasons for the slow progress of human resources development at SMEs in Shenyang and ways of promoting such development and enhancing the organizational as well as managerial strength are discussed next.

(1) Reasons for Less Effort for Human Resources Development

Here, the reasons why SMEs in Shenyang are “reluctant to develop human resources” are analyzed again with a view to pointing out missing points in the efforts of the municipal government to create an environment to promote SMEs.

1) Reasons for SME Owners Not to Emphasize Human Resources Development

- a) Many SME owners believe that employees on whom much money and time are spent for training will change their jobs to seek better rewards because of their low level of loyalty to their current employer.
- b) Because of the low business profitability, most SMEs are unable to recruit young people who command relatively high wages due to their high educational background. Instead, SMEs tend to recruit older workers who command lower wages despite their rich experience.
- c) There is a tendency among SME owners to believe that it is more rational to recruit ready to work personnel meeting their requirements from the manpower market rather than spending money and time on fostering the required personnel.
- d) Given the business situation under which the production volumes of main products are gradually declining and no replacement products have been developed, many SME owners believe that there is no special need to train their employees.
- e) Many SMEs adopt a passive attitude to human resources development as human resources development is instructed under the relevant programs prepared by the state and municipal governments because of the custom inherited from the time of a planned economy.

2) Reasons for Municipal Government Not to Emphasize Human Resources Development

In the meantime, the municipal government cannot be said to have been very active in providing support for SMEs for human resources development, presumably because of the following reasons.

- a) The municipal government's budget for the promotion of businesses is currently almost entirely directed towards large enterprises and there is currently hardly any budget to promote SMEs except for the credit guarantee fund.
- b) Many municipal officials involved in the promotion of industries believe that the promotion of large-scale state enterprises commands priority because of their strong impact on the municipal economy and consider the promotion of SMEs to be a matter of lower priority.

- c) Even though there is a statutory training system involving a training program formulated by the municipal government based on the relevant state program, this demands the compulsory training of employees of enterprises at the latter's own expense. As such, this system is not designed to promote voluntary human resources development efforts by enterprises.
- d) Even though the available supply of the actual human resources required by SMEs is limited, some municipal officials involved in the promotion of industries believe that it is enough for SMEs to recruit the required personnel from the manpower market to solve the shortage of human resources.
- e) Although the creation of an environment in which the self-reliant improvement efforts of enterprises are encouraged is the key to the vitalization of the economy under the principle of a market economy, some administrative officials believe that forced improvement led by the administration is still necessary.

(2) Mechanism to Promote Human Resources Development

Based on the problems and pending tasks pointed out above, this section discusses ways of promoting human resources development and enhancing the organizational and managerial strength of enterprises as a result of such development.

1) Business Principles of Successful Businesses Emphasizing Human Resources Development

In the general business environment in Shenyang described above, how many business owners are actually aware of the "necessity" for human resources development at present? It is self-evident that human resources development cannot progress unless business owners themselves strongly recognize its "necessity".

In this context, some private enterprises which have recorded remarkable growth in Shenyang merit special attention. The Dongyu Group, which is the largest private enterprise in Shenyang, adopts "the fostering of human resources" as one of its business principles. The Group is a conglomerate of which the diverse business fields include information, electrical, environment, refrigeration, pharmaceuticals, real estate and publishing. In 2000, the Group paid RMB 61.69 million in tax which was treble the amount in 1998, making the Group the highest taxpayer in Shenyang for three consecutive years. While making conscious human resources development efforts, the Group also actively recruits excellent personnel nationwide.

In Shenyang, the recruiting and fostering of the right personnel appear to be a key factor for the development of private enterprises, including the Dongyu Group. Dongfang Software, which has grown to become the largest software enterprise in China, is another enterprise which emphasizes the recruitment of excellent personnel and human resources development.

In the case of the Yuanda Aluminium Group, job-hopping by important engineers is prevented by making them have shares in the Group as the technical expertise of these engineers is considered an important asset of the Group. This enterprise is the second largest private enterprise in Shenyang. What is common to these enterprises is their emphasis on “intangible human resources” rather than “physical resources” and their significant growth can be attributed to the recruitment and training of excellent human resources.

2) Shortage of Fund is not the Key Factor

As seen above, all of the successful enterprises have been systematically proceeding with their own human resources development efforts. What is important for enterprises is expansion of the business scale in an assured manner. This will produce a “surplus” for the recruitment and fostering of capable personnel. When the business scale is small, however, such a “surplus” tends to be seen as non-existent because of insufficient funds. This belief is even stronger when the business performance is declining.

If this is the case, how can we explain the development of the Dongyu Group which has grown to become the largest enterprise in Shenyang. In 1985, Dongyu was a micro-enterprise which was established by the present president with a small number of research colleagues and initial investment of RMB 40,000. Dongfang Software, which is now the largest software enterprise in China, was also a micro-enterprise when it was established in 1988 by three teachers of Dongbei University with combined funds of RMB 30,000. As capable human resources are required to exploit business opportunities, the systematic fostering of human resources is essential even when there is no “surplus”. Many successful business owners unanimously testify that human resources development is the only way to beat the competition.

3) Mechanism to Promote Human Resources Development

How then can the owners of ordinary SMEs in Shenyang to recognize strongly “the necessity for human resources development”? Firstly, it is important to think of “a

situation in which SME owners begin to recognize the necessity for human resources development”. One thing provides the clue to understanding of the mechanism to promote human resources development.

In Shenyang today, SMEs pursuing new technologies and new products are relatively enthusiastic about human resources development. As they need to respond to the constantly changing business situation, they require personnel capable of providing such a response. These enterprises, therefore, need to invest in covering the cost of human resources development. It can be said that “the mechanism to promote human resources development” is functioning at these enterprises.

At the same time, there are many SMEs which cannot depart from the conventional style of business management in traditional industries. The owners of these SMEs are reluctant to spend on human resources development on the grounds of a fund shortage even though they believe that it is necessary to make some response to the changing business conditions. They tend to resist major changes of conventional business practices. In fact, there are many SME owners who have convinced themselves that “there is no special need for human resources development”.

Nevertheless, they do realize the necessity for the development of new products. The real feeling may be that “they do not know where to start because of the shortage of both funds and human resources”.

The mechanism to promote human resources development could start to function at these SMEs if hints for the development of new products are given to stimulate their willingness to improve. SME owners will begin to emphasize human resources development without much external prompting once they actually feel that their efforts to develop new products lead to improvement of the business performance in the near future.

(3) Creation of Business Environment to Promote Development of New Products

Given the above argument, the Shenyang Municipal Government should firstly try to “create an environment to promote the development of new products” if it is serious about introducing effective SME promotion measures. In this context, the Science and Technology Committee has been providing guidance and assistance to stimulate the development of new products by means of urging science and technology-oriented enterprises to apply for a grant and providing a grant for those enterprises which pass the grant approval process.

However, as the demand for the development of new products exists not only for science and technology-oriented enterprises but also for enterprises in traditional industries, the creation of a business environment to development new products by the latter is essential.

1) About New Products

It is important to define new products as wide-ranging products can be described as new products. Some are “innovative products” which are completely different from conventional products while others may simple be “improved products”. Improvement here applies to three different areas.

- a) Improvement of raw material or function
- b) Addition of new function
- c) Change of design, packaging and style, etc.

2) Development of New Products by SMEs in Conventional Industries

The prevailing business environment is such that the new products to be developed by SMEs in conventional industries must necessarily be improved products. As the development of innovative products requires time, personnel with suitable technical ability and much funding, it cannot be easily achieved.

Even though the development of improved products is not necessarily easy, the availability of many hints for product development makes people feel that they can produce improved products.

One hint for development is the review of each existing product from a different angle. It is a self-questioning process to ask whether or not the product in question has something which requires improvement or whether or not users are satisfied with the existing product. One approach often used for this self-questioning process is to apply the idea of a light, thin, short or small product. Questioning of the possibility of producing a lighter, thinner, shorter and/or smaller product constitutes the starting point for development.

This can be followed by a series of new questions, such as “can it be made more convenient to use”, “can it be made simpler”, “can it be made softer”, “can it be made smoother” and “can it be made more durable”, etc.

3) Creation of Environment to Develop New Products through Owner Training

If the municipal government is serious about promoting SMEs, it must try to create an environment to promote the development of new products by SMEs in traditional industries.

To be more precise, the municipal government should stimulate the willingness to conduct spontaneous research on the part of SME owners. For this, municipal officials in charge of the promotion of SMEs and appointed experts should study as many successful examples as possible to produce positive hints for the development of new products. Efforts to gather information on new materials and technologies are also essential.

These successful examples can be introduced at seminar while vital information can be supplied through a relevant information network or by special service facilities of the municipal government for the development of new products. These service facilities mean access to testing and research facilities for prototypes made by SMEs and also to testing and research organizations which can conduct actual testing on behalf of SMEs and provide practice guidance on technologies.

If the municipal government can motivate SME owners to improve their products or even develop new products, “the mechanism to promote human resources development” will start to function.

To repeat the previous argument, SME owners will begin to emphasize human resources development without much external prompting once they actual feel that their efforts to develop new products leads to improvement of the business performance in the near future.

4) Training on Managerial Organization and Organizational Reform

All of the above arguments indicate that there are certain steps to be followed for human resources development by SMEs. The first step is to conduct owner training to stimulate the development of new products. This training aims at creating willingness to develop human resources among SME owners and is followed by the provision of training for middle management and then training for other employees. By following these steps, steady and significant training effects can be achieved.

In the meantime, training on managerial organization and organizational reform is required as this is an essential element of the business improvement of SMEs.

Training on managerial organization should be provided in connection with the modern enterprise system which is one of the two targets decided by the State Education and Training Commission. However, it must be noted that managerial organization and organizational reform for SMEs are two themes which have hardly been dealt with so far in Shenyang. The same is true in the case of personnel management.

At many SMEs in Shenyang, the management responsibility and authority relating to jobs belong to individual persons. The lack of an organizational response means that a long time is required to respond to external inquiries. The fact that the person responsible for a specific issue tends to be unclear is another cause of the slow solving of problems.

To upgrade the present business system of SMEs in Shenyang to the level of the international modern enterprise system, training on managerial organization designed to stimulate a reform initiative between top and middle management will firstly be required. The common way of doing this is for the administration to plan seminars on managerial organization as part of the efforts to create an environment to improve the relevant awareness in view of motivating SME owners through their participation in such seminars. However, the present study has revealed that such seminars tend to struggle to attract participants in Shenyang if a participation fee is imposed. In fact, the situation is believed not to dramatically improve even if the participation cost is borne by the administration. This is because most ordinary SME owners in Shenyang do not believe that their participation in such seminars will immediately improve the business performance of their enterprises. They believe that any study on organization will not immediately lead to improved turnover or profit. The situation is completely different in the case of the development of new products. Everyone understands that the successful development of a new product together with improvement of the sales channels will immediately improve both the turnover and profit. Because of this, it is deemed preferable in Shenyang to firstly organize a seminar on successful examples of new product development, followed by the gradual incorporation of managerial organization and personnel management curricula in the training program.

6.4 Management and Technology Supporting

6.4.1 Policies of Administrative Organs in Field of Management and Technology

Recently, policies for small and medium enterprises are taken serious view by the Party Center, and the Department of State Affairs, and have being developed to province and city level taking opportunity of the 15 plan (10th 5 years plan, decided in the Central Committee on 11 Oct 2000).

Policy related to management and technology support is establishment of service system. According to conversation and written opinion by Mr.Weidong of the Small and Medium Enterprise Department of the State Economic and Trade Committee on Jun 2000 (the State Economic and Trade Committee Small and Medium Enterprise Department 「2000」 vol. 372), creation of service system will be tried selecting 10 model cities such as Shanghai, Qingdao, Chengdu, Fushun and Zhenjiang. The services contain five fields of technology, information, upbringing of skilled personnel, market development and credit/security, and priority differs according to the area. At Fushun city neighboring Shenyang, since finding of employment for restructured employees of government owned enterprises is a big problem, training for re-employment, mediation for employment and funds support are emphasized.

The Economic and Trade Committee of Shenyang city have conducted education for leading members and shifting of skilled personnel aiming reformation of government owned enterprises, transfer of ownership and change to market economy, and concentrating the energies to promotion of small and medium enterprises as an important policy in future. Establishment of service system is taken up in a report titled “Study for measures against further promotion of development of small and medium enterprises in Shenyang city”.

Content of this report is that the city plays the role of existing intermediation system and adjust the Sector Association Organization, and provides services of all fields for small and medium enterprises. Establishment of finance service system, establishment of intermediate organization for skilled personnel, establishment of technology service system (establishment of commodities development laboratory) and establishment of information network for small and medium enterprises are mentioned.

The Science and Technology Commission is conducting promotion of high technology and is positive to technology support for small and medium enterprises. Development of high technology is under promotion in whole state as a national industrial policy since latter half of

1980's, and technology development support have being conducted such as 863 plan, Torch plan, establishment of the High Technology Development Department and industry-university cooperation. In Shenyang city, extension of the High Technology Development Department, technical consultation works by the Technology Innovation Productivity Center and industry-university cooperation in each university is active and can be said that it is advancing compared with management support. Establishment funds for small and medium enterprises (thousand million Yuan) have being included in budget since 1999.

As for industry-university cooperation, education manager Mr. Li Xiping of Liaoning province stated in a report titled "New situation of cooperation between science and technology in universities and industries" (Oct 2000) that how contributed universities in Liaoning province to promotion of science and technology type industries, and is appealing to enrich more technology education in five years universities and to emphasize industry-university-laboratory cooperation. Technical department of universities lays stress on practical science and it is matching with Chinese policy of high technology development.

The Township and Village Enterprises Administration has conducting promotion of agricultural village industries (industrialization of agriculture) since 20 years ago. There are 170 thousand township-village enterprises as well as 700 thousand employees and occupying important position economically. Recently, products are diversifying not limited only to agricultural products but also building materials, aluminum processing, electronics information, machine processing, medicine manufacturing, costume etc.. Accompany with urbanization, there are many township-village enterprises in cities.

As for enterprise management, concentration and construction of enterprise complexes are promoted. By concentrating distributed enterprises into one location, high efficiency as a group is achieved coping with environment problems. More than 20 complexes are constructed in suburbs. In addition, policies promoting science and technology are conducted. Cooperation between universities and laboratories with township-village enterprises is under promoting and development projects required over 10 million Yuan are financed.

The Enterprise Administration has own educational organization and conducts upbringing of skilled personnel and management service. However, since level of technology and skilled personnel are still low and market competition will become more severe in future, upbringing of the level is necessary.

6.4.2 Situation of Management and Technology Support (Shenyang, Tianjin, Beijing)

(1) Technical Consulting Works of the Productivity Promotion Center in Shenyang City

The Productivity Promotion Center belongs to the Science and Technology Committee and is operated with self-supporting account system. Consulting department of the Center is full of activities devoting to technology consulting works for promotion of enterprise information system (introduction of CAD, CAM especially), industrial design, introduction of ISO etc.. The Center is also engaging consulting works for operation in concerned with technology operation funds, and has experiences of consulting works with more than 1000 enterprises during last three years. Enterprise information database that information obtained through consulting works are incorporated have been established and connected to each promotion centers in whole state through Internet.

The Center is aiming to lay stress on management diagnosis and support for small and medium enterprises in future.

(2) Research on Enterprise Diagnosis at Liaoning University

Prof. Liu who is vice-president of the College of Business Administration had learned on enterprise diagnosis in Japan, and created chair of enterprise diagnosis in the University for the first time in China. He has teaching the lecture since 1989 and has published textbooks and independent volumes. He has introduced the latest theory in concerned with causes of growth and failure of enterprise, technique of enterprise diagnosis, planning procedure of strategy etc. in a latest published volume titled “Let’s advance toward the success — Enterprise diagnosis and planning”.

Liaoning University is active on research of enterprise management and industrial education and is conducting education of MBA, training and diagnosis of enterprises. However, guidance of diagnosis for small and medium enterprises is still undeveloped and remaining as theme to be studied in future.

(3) Systematizing of Private Enterprises through the Federation of Industry & Commerce

The Federation of Industry & Commerce is the sole organization composed of private enterprises, and 80% of 15000 members are small and medium enterprises. Though there are many members, membership fee is not collected from general members and the Federation is operated with expense born by officers. As activities of commerce department of the Federation, member service and training/education are announced, but

actual activity is not sufficient. Activation of these activities is necessary and advice thereto was asked. In order to accomplish the policies for small and medium enterprises, systematizing of small and medium enterprises that play important role as windows and players is necessary and therefore it is required to study planning of new activity and formation of organization.

(4) Consulting Works for Enterprises at Tianjin Enterprise Management Training Center

This center is conducting consulting works as undertaking together with education/training. Management strategy, development of skilled personnel, investment planning and establishment of information channel are included in this works. There are some experiences with big enterprises for the most part and have noticeable effects. The diagnosis method had been learned from Productivity Head Office in Japan, and diagnosis content are strategy and management control mainly. Many diagnoses have been conducted, but it seems as if experience of consulting works is not enough.

More practical and up-to-date theme should be taken up in future. There are demands to learn method of diagnosis for small and medium enterprises. This Training Center is hoping to increase latitude and depth of undertaking by upbringing not only training but also consulting works. For this reason, diagnosis system for small and medium enterprises as well as activities of diagnostician (consultant) of Japan are interested.

(5) Policies for Small and Medium Enterprises and Correspondence to Enterprise Diagnosis at the Metropolitan Society Development Laboratory

This laboratory is a think-tank conducting investigation/research of policies at Beijing city. Promotion of small and medium enterprises is important, because more than 95% of enterprises in Beijing city are small and medium one. In particular, since Beijing city is playing role as a leader of district administration, affects to the district is high. Small and medium enterprises are insufficient of selling skill, technology skill and skilled personnel, and are inferior compared with Japanese enterprises. Therefore, in order to learn from Japan, exchange between Small and Medium Enterprise Diagnosis Association (Tokyo branch) in Japan have been practiced every year. 13 enterprises have been diagnosed already. Staff of the Laboratory have visited Japan on Sep 2000 and studied Japanese diagnosis system. Beijing city is thinking also to strengthen diagnosis and consulting skill.

6.4.3 Technology Support

(1) Industry-university Cooperation of the Northeastern University

This University has strong position on information technology and is realizing results through scientific research and industry-university cooperation. The University is cooperating with NEU-ALPINE software Co. Ltd., Baoshan iron and steel works in Shanghai, Fanzheng corporation in Beijing and there are 10 soft houses. Supporting system to start a new business is arranged through consulting of three members of sponsored company, university and individual (professor etc.) under approval of the Property Control Department of the University. One reason thereof is that there are many graduates of Northeastern University in important posts of industrial field and administrative organs, so as industry-university cooperation is easy to proceed. In the College of Business Administration, a manager foster course named EMBA has been founded.

Foundation of an enterprise is encouraged to the graduates in order to put practical use the training results at the school, and some success examples are found. The pictures of successor are noticed in the school to encourage the juniors.

(2) Industry-university Cooperation of the Shenyang University

The Professional Skill Division of the Shenyang University is conducting practical training to 4th grade students through industry-university cooperation. This training is educated by constructing education curriculums suited to enterprises under consulting with job offering enterprises including practical exercises. It means that professional education conducted normally by enterprises after employment is conducted in the school during school days. In addition, sale of university's patent to an enterprise (temperature measuring equipment, for example) as well as commodity development cooperating with enterprise (liquid transportation equipment, for example) are practiced.

(3) The Ministry of Science & Technology/Department of High Technology Development & Industrialization, Municipal Science and Technology Commission in Beijing/Technology Innovation Productivity Center

Technology development and industrialization of four high technology fields of 1) Information system, 2) Automation, 3) Novel materials and 4) Energy are attempted over whole state. High technology parks have constructed at 53 places over whole state. There is a station in Shenyang city. Establishment fund for small and medium enterprises was founded to support to high technology and establishment of enterprise. Criteria of finance

is one out of three, i.e. either conversion to high technology enterprise from old one, creation of new enterprise or shifting of facilities/skilled personnel to other field. To convert big enterprises to high technology field, conversion of small and medium enterprises that support big enterprise to high technology is unavoidable. However, since there are some promising enterprises even in low technology field, suitable measures are considered so that possible to support in management aspect.

At Beijing city high technology parks have been constructed in Zhongguancun village since 20 years ago. Foster of incubator business and high technology ventures are taken great interest. There are over 100 members in the Venture Business Association. The Technology Innovation Productivity Center was established on June 1998. The content of activity are training for leading member of enterprise, training for industrial designers, training of production control etc., diagnosis and creation of network. Home page of IT network was established one year ago. Because the IT network is statewide network, further repletion is considered.

(4) Industry-university Cooperation of the Quinghua University

This University is one of top class in whole China on technology field. The University is positive on technology research and industry-university cooperation, the Industry-university Cooperation Committee is a window of project contract. Many enterprises with the name of “Tsuinghua” are affiliated one with the Quinghua University. Taking opportunity of 90th anniversary of foundation, establishment of small and medium enterprise club is scheduled. There are many capable men in the graduates and about 300 graduates are active in Tokyo organizing schoolmate club. As a national project between Japan and China, 3E project (Energy, Environment, Economy) are under progress with Japan (the Keio University). Prof. Fu of Department of Technology pointed out the following problem in concerning with present situation of research & development and industry-university cooperation as well as patent based on development experience of an automobile engine:

Good results can be obtained when basic research is taken over by university and application research (development as commodity) is taken over by enterprise. However, even if governmental subsidy is applied to basic research it is hard to get approval for reason of no precedents. Enterprises are usually hurried to obtain a result and short in skilled personnel. Lay address on profitable practical technology and basic research is treated lightly. Personnel of enterprise who are in charge of development are low in technology level and have poor critical mind. Even if a development is carried out in the university and a patent is obtained, kick back thereto is few. It is imitated soon even if a

patent is obtained. Because cost of lawsuit thereto is high, it is unavoidable to bear silently.

6.4.4 Results of Questionnaires to Enterprises (investigated to 100 enterprises)

Replays of 100 enterprises to the questionnaires are as follows.

As for public supporting policies, 60% of enterprises replayed as substantial and appreciated highly compared with private supporting policies. However, about half replayed that supporting system is hard to understand and therefore hard to utilize, accordingly there remains problem on Public Relations and utilizing procedure.

The following items are overwhelmingly many as fields expected to be supported: (1) Commodity development (78 enterprises) (2) Improvement of selling ability (52 enterprises) (3) Improvement of technology (50 enterprises). Reflecting severe competition in the market accompanied with shifting to market economy, commodity/technology development and marketing are common problems among replayed enterprises.

As for industry-university cooperation, 51 enterprises replayed that they have experience, so it can be said that they have strong connection with universities and laboratories.

Table 6-4-1 Questionnaires and Replays on Management and Technology Support

Questionnaires	No. of replay
Public supporting policies for management/technology	
–1 Supporting policies of public management consulting agencies are substantial	52
–2 Supporting policies of private management consulting agencies are substantial	16
–3 Don't know management consulting agencies	16
–4 Don't want to utilize management consulting agencies	9
Problems on public supporting policies for management/technology	
–1 It can not say that supporting policies are substantial	25
–2 Fields of supporting system are biased	10
–3 Supporting system are hard to understand and hard to utilize	40
Management/technology fields expected to be supported (plural replay is allowed)	
–1 Strategy against business innovation in future	27
–2 Improvement of technology	50
–3 Development of commodity	78
–4 Improvement of selling ability	52
–5 Technical proposing ability	19
Have ever cooperated with research agencies such as university?	
–1 Yes	51
–2 No	32
–3 Have not proceeded to agreement	5
–4 Don't know cooperating partner	0

Note: Since there are not replayed items or plural replays, the total of replays is not 100.

6.4.5 Comparison with Japanese Policies

In this section, outline of management/technology support in Japanese small and medium enterprise policies and items thereof that seems to be applicable to Shenyang city are mentioned. Content of Japanese management support is consulting works and not only individual enterprise but also enterprise group is subjected.

- Individual enterprise : Diagnosis, provision of knowledge/information (lecture and training are included), consulting/advise, support for improvement, consulting system classified by category of business/function.
- Enterprise group : Coordination (exchange between different business category), systematizing (cooperative association, category of business, district), information network, support to vision planning of business world (district), training.

Technology support means supporting to introduction/development of new technology or development of new commodities and following items are included.

- Technology development promotion activity: Supporting system to each step from feasible study to research & development.
- Finance and tax system measures such as subsidy, systematic finance and favorable tax system.
- Promotion of technology development and commodity development through joint venture (enterprise, laboratory and management corporation).
- Promotion of development and creation of new business through enterprise group by means of exchange and harmony between different business categories.
- Provision of places such as venture plaza, technology plaza, science park.
- Upbringing of skilled engineers.

The scheme of management/technology support is shown in Fig. 6-4-1.

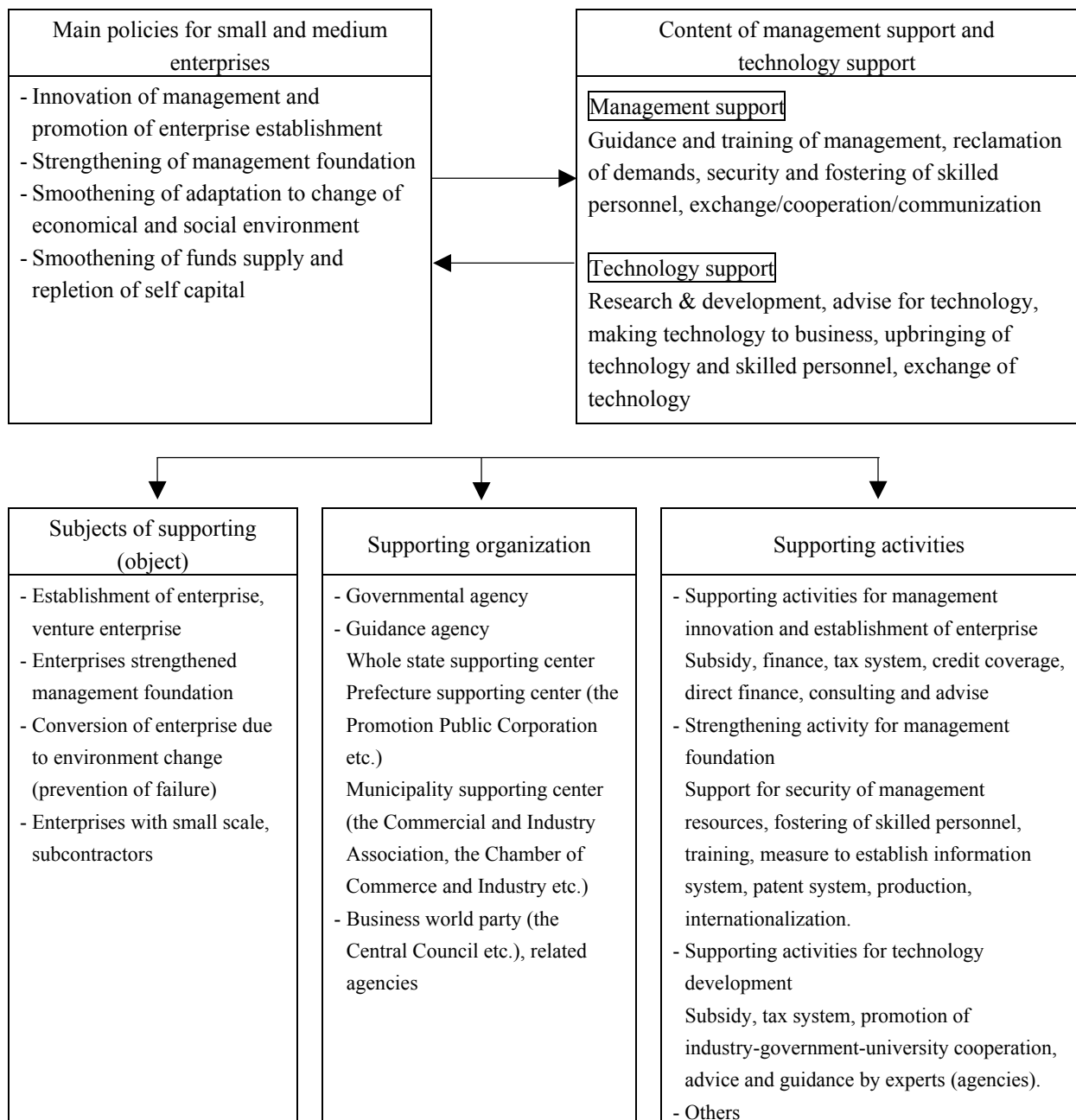


Fig. 6-4-1 Scheme of Management Support for Small and Medium Enterprises
(Year of 2000)

Promotion of small and medium enterprises is required to proceed systematic under shearing of respective role by governmental agencies-executing agencies-experts (specialized agencies)-enterprise organization. This is compared to “motor vehicle with four wheels drive”.

Now, policies conducted in Japan in concerning with establishment of service system that is at issue of Shenyang city are as follows:

(1) Planning of Policies for Small and Medium Enterprises and Research Agencies

Planning of policies for small and medium enterprises is carried out by the Small and Medium Enterprise Agency. Annual policies are summarized in the small and medium enterprise white paper. Statistics and fact-finding survey are included in the white paper. There are some prefectures issuing small and medium enterprise white paper. Policies are disclosed to the public through Internet, comments on policies and pamphlets for guidance are substantial.

As a research agency, there is (Juridical foundation) the Small and Medium Enterprise Synthetic Research Structure, and is engaging planning, introduction and spreading of small and medium enterprise policies of foreign countries and Japan. Management indexes of small and medium enterprises and business world are disclosed to the public so that managers of enterprises can implement management comparison or self-diagnosis. In addition, there are private bodies providing such service (the All Japan Track Association, the Small and Medium Diagnosis Association).

As academic society, the Small and Medium Enterprise Society and the Venture Society have started recently.

(2) Establishment of the Small and Medium Enterprise Supporting Center

The Small and Medium Enterprise Synthetic Agency is an agency engaging execution and P.R of policies, and is head office of the Supporting Center. The local Supporting Centers are located in prefectures and municipalities positioned under prefectures. Consulting windows such as information, technology and finance that was scattered until now according to administrations are unified, and established head office and branch offices (districts) of the Supporting Centers so that managers of small and medium enterprises can receive one-stop service. In the Supporting Center specialists such as diagnosticians, consultant engineers, accountants and lawyers are stationed.

(3) Small and Medium Enterprise Diagnostician System and the Small and Medium Enterprise Diagnosis Association

There is a system called small and medium enterprise diagnostician that is qualified by government. The diagnosticians are private consultants or administration staffs, and engage diagnosis and guidance of small and medium enterprises as specialists. The diagnosticians are registered to state or prefectures and engage promotion of small and medium enterprise policies as well as consulting and advise to managers of small and medium enterprises as consultants belong to state or prefectures. A party of

diagnosticians is the Small and Medium Enterprise Diagnosis Association, and the specialists are registered to the Association classified by fields and are introduced through Internet.

(4) Systematization of Small and Medium Enterprises

When policy for small and medium policies are executed, it is not to appeal to many and unspecified managers of enterprises but appeal to specified subjects. In addition, through operation of business that conducted by cooperated organization between managers of small and medium enterprises who are short of resources, interconnected profit can be enjoyed. For this purpose, a main policy that has laid stress during 50 years of postwar period is systematization, cooperation and coordination of small and medium enterprises. Typical organizations are the Business Cooperative Association, the Chamber of Commerce and Industry and the Commerce and Industry Association. The Business Cooperative Association is established in every business category, district and business group, and there is the Small and Medium Enterprise Group Central Association with whole state scale. Additionally, exchange between different business categories and information network are promoted actively. Activities such as creation of small and medium enterprise complex or activation of shopping center are executed by not individual manager but by union established with participating enterprises as cooperated activity under cooperate responsibility. There is a foster system that a specified ratio of governmental jobs shall be sheared to small and medium enterprises, but only qualified superior unions (qualified unions by government) allowed to participate in this jobs.

(5) Essential Points of Service

There are the following policies as essential items in current service.

1) Management innovation (venture) support

This policy is a leading one of current policy for small and medium enterprises. This is a system to support all aspects such as finance, tax system, management and technology in order to promote establishment of new enterprise or second enterprises.

Manager of enterprise shall submit business plan (management innovation plan) first of all, then this plan is reviewed through authority and if it is accepted this enterprise is supported through supporting measures and favorite measures. Small and medium enterprises are classified into 3 groups and A class of enterprises having high motivation and capability are selected and fostered. The enterprises are supported at

each step of establishment (creation of enterprise) and start of business. There are venture plazas as exchange place and small and medium enterprise investment & foster corporation as investment agency.

The subjects of this system are business plan not only of independent enterprises but also of enterprise groups (unions of same business category or network of different business categories).

In addition, management ability strengthening measures are applied to B class enterprises, and measures for business conversion (conversion or discontinuance) or prevention of failure are applied to C class enterprises (enterprises required restructuring due to structural depression).

All policies are conducted based on concept that self-help effort and self-responsibility are basic principles, and administration helps (serve) at rear side so that the enterprise can play business activity freely.

2) Technology support

There are many policies based on principal that technology development and commodity development are unavoidable in order to foster small and medium enterprises having international competitive power.

One of them is technology innovation promotion activity coping with a theme. In this activity, theme is collected publicly from small and medium enterprises on new technology field specified by state, and research and development thereto is entrusted to the superior proposal. The other one is that technology development of small and medium enterprises is promoted through industry- government-university cooperation. This is promoted through public research agencies or the Small and Medium Enterprise Synthetic Agency as nucleus. Universities are also corresponding with industry-university cooperation and TLO (Technology Transfer Organization) are established various area.

Other conventional supporting measures such as exchange between different business category (harmonization), subsidy to novel research activities and subsidy to acquisition of ISO certification have being continued.

6.4.6 Problems on Management / Technology Support

Based on above investigated results, the problems are summarized as follows:

- (1) Policies for management/technology support are not kept perfect and not systematic

Essential points of conventional policies were innovation of governmental enterprises and therefore small and medium enterprises were beyond help. In addition, administration is separated vertically resulting big difference of understanding and corresponding to management support and technology support according to each administrative organizations such as the Economic and Trade Committee, the Science and Technology Commission and the Township-Village Enterprise Administration. It can say generally that management support (support for management innovation through enterprise diagnosis or management guidance) for small and medium enterprises is poor and is not promoted systematically. However, necessity of diagnosis and management support for small and medium enterprises are well understood at every organization. The problem is how should conduct concrete policies.

- (2) Management level of small and medium enterprises are low and therefore necessity of management support is high.

Enterprise visiting was conducted actually, and it was found that there are many enterprises that are business depression, liabilities exceeding the assets or sleeping, in addition management ability, technology skill and capital ability are extreme poor. These problems were pointed out in advance through pre-investigation or various investigations, but actual situation of enterprise front-line is worse than expected. This problem is also pointed out concretely in enterprise diagnosis through the diagnosis group. There were opinions of visited enterprises that many of Chinese small and medium enterprises will be fail owing to participation in WTO. In other words, it is a situation that there are many sick persons but they have no self-awareness, and further there are no practicing doctors who perform diagnosis. Therefore, strengthening of management support is urgent problem.

The field required management support is important industry policies, especially supporting activities for establishment of enterprises and management innovation endeavoring promotion of high technology industry, and to this technical field is important. Correspondence to IT and Internet are the essential points.

Additionally, there are private small and medium enterprises that governmental enterprise had placed under private management. These enterprises are over-weighted by

old liabilities, old facilities and employees of government owned time, therefore structure innovation is urgent problem.

According to the questionnaires and the enterprise investigation by interview, management ability development of managers and managing leaders, commodity technology development, marketing (sales) are the fields required supporting.

(3) Correspondence to Technology Support for Small and Medium Enterprises

Technology support has being promoted in high technology related fields, active in technology consulting works and industry-university cooperation in each university, therefore it can say that technology support is advancing compared with management support. However, as shown in replays to questionnaires to 100 enterprises, necessity of commodity development and technology development are high and improvement of technology skill is big problem for small and medium enterprises that are short in skill personnel and technology. In particular, since conventional technology support was poor for small and medium enterprises controlled by the Economic and Trade Committee, it is necessary to proceed supporting positively in future.

(4) Systematization and Creation of Network of Small and Medium Enterprises

Conventional control system of government Owned enterprises is unwarrantable today that private enterprises hold the majority. Promote systematization of private enterprises, and activities shall be conducted under leadership of private enterprises while administration shall play new role of vision planning and backside supporting. Organization of small and medium enterprises differ according to history, economy, society, culture etc. Japanese examples are introduced but it is necessary to establish organizations of small and medium enterprises appropriate to China and Shenyang city.

Against above problems, following four suggestions are settled and adopted as a part of action plan.

- Setting up of small and medium enterprises service center
- Supporting of ventures and management innovation
- Supporting for technology
- Organizing and network making up of small and medium enterprises

6.4.7 Problems of Bringing up of Supporting Industry

If it is required to limit to one point the most important problem in Shenyang among problems of management and technology, it is suitable to adopt “how to bring up supporting industry”. As there grow only insufficient supporting industries that can supply parts to large enterprises, parts purchasing power carried away by outside region. How to measure for this problem is discussed.

(1) Serious Problem of Purchasing Power Carried away by Outside Region

Shenyang is a Chinese representative heavy industrial city, and has a lot of small and medium manufacturing enterprises of various kinds. In addition to these, there are several large assembly and manufacturing enterprises that are leading city economy powerfully now in Shenyang. For instance, there exist rapidly growing large private enterprises such as “Dongyu industrial group”, and as foreign capital company, there are automobile company, chemical company, special facility maker, and electronics and communication equipment maker etc. As for state enterprise, assembly and manufacturing large enterprises in the field of metallurgy, airplane, engine, lathe, transformer and mechanical vehicle are also main enterprises in Shenyang. The serious problem is that these large enterprises procure their necessary parts not from small and medium enterprises in Shenyang but from “outside region” such as Shanghai or Huanan. In the case of Dadong ward, procurement ratio of parts from outside region is up to 80%. It is a fairly large loss to Shenyang that about 80% of purchasing power is carried out by outside region.

The reason of this high procurement ratio from outside region is that local small and medium enterprises in Shenyang do not produce such parts that satisfy large enterprises which require high quality level. In this investigation, we recognized that quality level and cost level of products from native small and medium enterprises reach hardly the level to give satisfaction to ordered company.

After several times of our visit to actual manufacturing field, the investigation team feels that both accuracy of processing and quality of the products are low at international standing point because machine tools are very old and management grade is also low. Looking at these situations, it is understandable that large enterprises of ordering side are unavoidable to procure parts that satisfy required grade from outside region in order to keep their product at stable grade.

(2) Procurement from Outside Region Looked in Developing Countries

This “outside problem” that is the problem of purchasing power carried away in other word is not particular to Shenyang city. There occur similar problems in other developing countries such as in east Europe. Even in the case that large enterprise of advanced country installs production point in developing countries where the production cost is low, and keeps production activity in order to reduce cost, it often procures necessary parts from “outside region”.

For instance, electronics equipment makers in advance country procure parts from familiar dealers in advanced country in many case, when there is no sufficient native maker that can satisfy the quality accuracy of the parts in developing country. If the procuring parts are light, transportation cost is small enough to cover production cost and it is considered that total cost is cheap comparing to procure reliable parts.

(3) Absorption of Purchasing Power for not Small and not Light Parts

Aside from these small and light parts for electronics, the problem in Shenyang is that they are also procured from outside region. As these heavy parts increase, high transportation cost becomes the big reason of increased production cost. For the first, we must recognize that enterprises in Shenyang pay not so little transportation cost. It is possible to continue procurement from outside region preparing to bear less high transportation.

It is a crucial for Shenyang to keep main part production, in the condition that it is required more effort to reduce cost from now on, when China joins the WTO and goes into more severe international competitive market.

Thinking as this, it is easy to understand the necessity of bringing up of the supporting industry as procurement parts base for large assembly and manufacturing enterprises in Shenyang. Is it the way of surviving that native small and medium manufacturing enterprises improve their management drastically and have the ability to supply for large assembly and manufacturing enterprises almost all of parts in Shenyang city?

(4) Reason Why There Grows no Parts Supplying Enterprises in Shenyang

In order to bring up the supporting industry, it is necessary to grasp the cause why in Shenyang there grows little small and medium enterprises capable to supply parts that have the quality which large enterprises require.

As mentioned above, supporting companies as in Japan do not build up yet in Shenyang. As the present situation of parts supplying system in Shenyang, it does not reach to the situation that for example dies maker and prototype processing maker works together as in Japan in the case of division and collaboration of small and medium scale manufacturing system.

Far from it, there are many enterprises adopting fullest production system in state small and medium manufacturing industry under the influence from planning economic era. They carry out casting, hammering, pressing sheet metal and machine processing, and produce almost all of parts necessary to assembling. If you adopt the fullest production system in small and medium enterprise, both production efficiency and facility availability become worse, because you could not get scale merit in production. This will connected to high production cost.

Furthermore, if there are many small and medium enterprises adopting the full-set production system, there happens duplication of production processes and this makes worse facility availability and production efficiency of individual enterprise. The large assemblers that know this situation do not feel attractive to small and medium enterprises of the full-set production system as their entrusted supply sources of necessary parts.

Looking at actual situation, it is desired to struggle to improve the structure of social division system and to build up parts supplying system by division of works.

(5) Hints Acquired from Subcontract Division System

When considering of parts supplying system by division of works, “a hint” is Japanese subcontract division system of manufacturers. The outline of the system is shown below:

For the first, when enterprise grows up large in scale and expands its kinds of product, there occurs the more increase of fixed cost if it wants make all parts from in house plants. This causes continued increase of fixed cost and excess of fixed cost ratio and make the enterprise less adaptive to meet economical environment as recession. If there continues the increase of fixed cost and occurs the excess of fixed cost ratio, adaptive capability will decline for change of outside environment as business recession. It is necessary to divide parts manufacturing and entrust those manufacturing work to outside companies.

When the procurement division of large company studies outside partner for necessary parts procurement, it selects the small and medium enterprises that can supply the parts

of controlled accuracy fitted to required grade and of required amount steadily as the partner. The enterprise that entrusts continuous parts manufacturing and procuring according to a contract is called as “parent enterprise”, and the enterprise that produces and supplies the parts continuously according to the contract is called as “subsidiary enterprise”.

Selecting the subsidiary enterprise, procuring cost of parts is a factor of selecting criteria, but whether it can supply the parts of controlled accuracy fitted to required grade and of required amount steadily is more important. In the case that technological levels of subsidiary enterprise does not reach to the required level of parent enterprise, procurement division of parent enterprise often brings up subsidiary enterprise by consulting or training for technology. Parent enterprise brings up several necessary subsidiary parts manufacturer as this, makes these enterprises to business partner and constructs subsidiary division and collaboration system. Japanese supporting industry has built up based on the construction of this subsidiary division and collaboration system between parent enterprise and subsidiary enterprise.

(6) Problems on Bringing up of Parts Supplying Enterprise

This subsidiary division system is regarded as the most efficient method of bringing up the parts supplying enterprise in the world.

There contained each maker’s specific know-how in manufacturing technology and process of supplying parts, and there are region difficult to standardize because it is not opened to public as enterprise secret. It is considerably difficult for outside person to master technology not opened to outside even if he analyses completed products. Furthermore, acquisition of technology is difficult by only desk learning, there is no way except than receiving the education and training by OJT (On the Job Training) in the production field from the technologist in the enterprise developed its product.

In reality, it is difficult to bring up parts supplying enterprise in general. Though Japan has been conducting enterprises already in several developing countries by building up the organization corresponding to Japanese productivity center. However there grows only little parts supplying enterprises in these countries.

(7) How to Bring up Parts Supplying Enterprise

Large assembly and manufacturing enterprise some times purchases necessary parts as spot, but in general appreciates the enterprises that can supply the parts of controlled accuracy fitted to required grade and of required amount steadily, and purchases parts

from them continuously. Therefore, these are not the parts to be replaced by the other parts, but the parts to be procured continuously by bringing up subsidiary small and medium enterprise as to be able to apply completely for its special manufacturing demand.

It is clear that the method of building up subsidiary division dealing system under the large assembly and manufacturing enterprise is said the best, in order to bring up parts supplying small and medium enterprise.

Then it is necessary to invite excellent assembly and manufacturing enterprises to Shenyang in order to bring up parts supplying enterprises in Shenyang, but it is no so easy as far as looking at present situation. Does excellent assembly and manufacturing enterprise feel a charm for embarkation in Shenyang now? Supporting industries in Shenyang have to be developed to attract foreign assemblers.

Consequently, it becomes necessary to cope with this problem. A first suggested measure is building up of a model of parts supplying system in Shenyang, and make it the “groundwork” to attract parts makers as many as possible.

1) Dispatching expert of large experience in procurement division

Groundwork shall be started from bringing up of subsidiary enterprise in Shenyang for assembly and manufacturing enterprise. It is necessary to practice consulting for specific field in order to bring up parts supplying enterprise in Shenyang. As for specialist personnel for this, if picking up automobile industry for example, specialist of procurement in automobile enterprise in Shenyang is the most preferable, but there is no reason to use person in an enterprise from the first. Taking the place of this, specialist of procurement in automobile enterprise in Japan shall be invited to Shenyang.

So to speak, expert for bringing up small and medium enterprise will search small and medium enterprise having the possibility of parts supporting in Shenyang, and will practice consulting guidance and technical training. The other hand, he will inform the technical improvement situation to automobile enterprise in Shenyang, and to introduce to contract as subsidiary enterprise when it reaches to a definite level.

The consultant company that covers excavation and training specifically does not yet exist in Shenyang, but in Japan Matsushita electric industry for example has expert consultant subsidiary company.

If Shenyang city hopes earnestly to build up parts supplying enterprise, it should contract with company like this for example and should request to dispatch specialist to Shenyang. Besides, as for the dispatch fee, it is more economical to contract directly with individual specialist than to contract with company, so the method of individual contracting is recommendable using database registered various field of specialist.

2) Invitation of parts supplying enterprise and bringing up of subsidiary enterprise

It needs considerable time to bring up parts supporting enterprise in Shenyang by inviting specialist. It is said two years necessary to bring up subsidiary enterprise in general.

If it hopes more rapid bringing up, then it is inevitable to invite parts supplying enterprise in specific field from advanced countries like Japan. For instance, a Japanese enterprise supplying parts nominates to subsidiary enterprise of a principal assembly and manufacturing enterprise in Shenyang, and is evaluated its technical and managing power, and grasps the chance of embarkation to Shenyang.

This Japanese small and medium enterprise finds out comparatively excellent small and medium enterprise in the same field in Shenyang, and selects this as partner of joint business. Both enterprises establish Japan and China joint enterprise, and introduce Japanese style production management technology. Through these processes, this joint enterprise shall be appointed as subsidiary enterprise of principal assembly and manufacturing enterprise in Shenyang, shall make results, and shall grasp trust of parent enterprise. On the other hand, the enterprise shall challenge to develop original products. As the small and medium enterprise in Shenyang side consisting a partner of joint enterprise will advance gradually the technical and managing capability, it will come up to international level for parts supplying enterprise. It is also the same that Shenyang city desires.

If it becomes to be possible to develop a subsidiary joint industry of principal enterprise in Shenyang in a specific field, this will become a model of parts supplying system, and it will be possible to extend this to each field. If there grows

subsidiary enterprise in each field and is extended and developed in the field, it will conduct to construct supporting industry in Shenyang.

If it will accomplish to improve the manufacturing technology and quality control up to the grade of that advance country will satisfy, it will be possible to invite a lot of excellent enterprise to Shenyang. If it will become more of excellent enterprises such as foreign capital company procure parts frequently from parts supplying enterprises in Shenyang, Shenyang city will be appreciated as world dominated production base.

6.4.8 Mechanism of Management Improvement and Technological Advancement

If city government merely supports the existing large enterprises, the future of Shenyang economy does not come in view. It is necessary to recognize sufficiently that new seed of industrial development is existed in small and medium enterprises or ventures. City government shall motivate small and medium enterprises to tackle management improvement and technological advancement for themselves collaborating with regional government as ward, and shall construct the system to conduct to develop applying to market economy. For that purpose, it is the immediate problem to grasp the problem of government support and to find what is most effective in order to improve management support and technological support concretely.

(1) Problem on General Governmental Support

In Shenyang, there is a division administrating guidance and supporting consultation for enterprise to improve technology already, but that is not familiar to small and medium enterprises yet. The reason is that it is difficult for small and medium enterprises to use because of vertical administration service, and there is insufficient measure to prompt the circumstance for management improvement and technological advancement for themselves.

(2) Negative Influence of Vertical Administration

For the first time, problem of negative influence of vertical administration shall be discussed. In Shenyang city, there are so many kind of supporting governmental organization concerning management improvement and technological advancement for small and medium enterprise already. For instance, there are Economic and trade commission in city government (Small and medium enterprise department), Science and technology committee, Township-village enterprise administration, Privatized economy

development promotion committee, Industrial sector office, Small and medium enterprise service center and Collective enterprise office etc.

It turns out there is a big difference in recognition and effort attitude for management improvement and technological advancement after visiting to each organization. However, although it is necessary to consider the difference of established object and historical progress of organization, yet there is too big difference of consciousness for small and medium enterprise supporting.

This depends on the progress of division of thinking style among each organization, and it is felt some times as almost sectionalism. Actually, it is also felt that communication and collaboration system among each administrating organization are not sufficient. It is impossible to promote the supporting for small and medium enterprise systematically in the situation as this.

(3) One Stop Service Dissolving Vertical Administration

There is nothing but “one stop service for small and medium enterprise service center in ward level” as “the experimental place” to dissolve this bad influence of vertical administration. The reason is that it is ward and province level administration that manages directly and conducts actually the small and medium enterprises with responsibility. When administrating various kinds of services to small and medium enterprise, the positional difference of each governmental organization has entirely no relation and true correspondence is necessary. That is clear to suppose the situation for the enterprise to serve to its user. The positional difference of each division in the enterprise has absolutely no relation to the users.

(4) The First Window for Consultation

Recently, there happened a movement to settle the window in certain ward. Dadong ward are planning to establish service center supporting the development of small and medium enterprise in 2001 leading the other ward in Shenyang. That center has ideas to do procedure service such as consulting window in order to protect legal justice of small and medium enterprise based on law and business permission or approval, and to supply information consulting supporting service. Besides, Dadong ward has the design for the center to give one stop service facility in order to improve he service to small and medium enterprise. It aims to give convenience to user by integrating all supporting service facility to a place. Although service center in the ward is an organization, another organization “Credit Guarantee Fund in the ward ” is also under preparation to be established now.

“Credit Guarantee Fund in the ward ” will be settled in the center for small and medium enterprises that have little credibility because of the insufficient guarantee and are difficult to collect finance, and will possess financial intercession facility. At first, money of 5 million RMB for security fund will be prepared, and financial intercession will be practiced up to 40 million RMB based on this fund.

(5) Construction of Small and Medium Enterprise Supporting System

The center in Dadong ward is a splendid idea, but it is only rough concept and it is necessary to analyze the detail sufficiently and to add other facilities in order to work actually.

In its concept, there is a consulting support specific to China. For instance, consulting support for conversion of enterprise property style according with privatization of state enterprise and consulting window in order to protect legal justice of small and medium enterprise based on the law adapting to the market economy etc. are corresponded to this. Furthermore, as for credit security facility system, it is not suitable to apply Japanese style as it is, rather it is necessary to make up a new system fitting to Chinese specific business tradition.

Now, the concept issued from Dadong ward could not be found in the past at all and is very good idea, but it is not satisfy all the facility necessary to support small and medium enterprise. Although it is necessary to add the lacking facility, analysis of additional facility and proceeding of classifying and connection of total facility will accomplish “style of small and medium enterprise supporting system in the ward level”.

City government shall observe this movement, shall rank up as “a model” in ward level after evaluating and discussing the system style, and shall attack to spread and expand to the other ward or prefecture. Naturally, the “contents of small ad medium enterprise support system” decided finally by city government’s judgment should be almost the same as the service menu of “one stop service in the ward”. Otherwise, small and medium supporting service will not spread and settle in the whole city. City government should collaborate with regional government such as ward etc. as for this service menu, it is mentioned below.

(6) Problem of Bearing Supporting Expense for Enterprise

Center in the ward level is familiar consulting window to regional small and medium enterprise, and motive to challenge to management improvement and technological progress. However, there are necessary supporting budget and specialist instructors to

promote management support and technical support for small and medium enterprise. As for specialist instructors please refer to the section of human resource development and attached documents, and in the following it is mentioned about the problem of supporting expense.

Looking from the standpoint of the beneficiary payment, there is no problem if administrative organization collects actual expense necessary to service from small and medium enterprise. However, there happens often not to able to collect all of actual expense for all the supporting services. For example, it will be impossible to collect consultation fee for only introductory consultation, when serving to a small and medium enterprise that visits to consulting window. If it were charged even this case, the intension of administration to prompt self-helping effort for management improvement would not spread to small and medium enterprises. City government shall charge to procedural services except this.

(7) Technical Supporting Window Prompting to Develop New Products

If the new seed of industrial development to bear the economy of Shenyang in the near future is exist in small and medium enterprise or venture, city government must to prompt to make the environment as encouraging especially the developing new products.

Concerning to this, productivity promotion center belonging to science and technology commission establishes the technology development promotion fund for scientific and technological enterprises as nation level, practices supporting work that executes feasibility study for applicant enterprises for this grant money and supports the enterprise that passed the judgment. But, we could not say at all that this is enough. Because, building up environment to promote development does not spread and settle, if regional governments as city and ward do not collaborate and prompt.

It is desirable for these governmental organizations to collect hints for developing new products and information for new material and new technology, and to supply these to small and medium enterprises. Together with this information offer, it is inevitable for building up the environment of “inspection and research facilities organization” to prompt the utilizing those facilities which small and medium enterprise could not possess, to reply for the request of inspection and to cover the work of technical training in the field. It is necessary to build up this in city government level. If it is possible to use existing facilities, it is not necessary to build new one, but function of inspection and research facilities organization is necessary. In this organization, executing the training

workshop and course for small and medium enterprise technologist intentionally gathering applicant with actual expense can be said to make of environment.

(8) Contents of One Stop Service

In the small and medium enterprise service at ward level, the following nine menus will be necessary:

- 1) Consulting on the law: corporation registration, business permission and approval, protection of legal right
- 2) Consulting on management: management consultant advices on management solution by interview
- 3) Consulting on privatization: consultation for privatization, offer of information such as asset, ground and market
- 4) Consulting on financial support: financial support through credit security facility in the ward
- 5) Consulting on technical development: utilization intermediation of technical promotion fund and inspection and research facility organization
- 6) Consulting on intermediating support: capital joint and technical tie-up with foreign enterprise, building up of industrial complex
- 7) Consulting on establishing support: advice to establishment and capital acquisition, consultation for business conversion from depressed field
- 8) Consulting on associative organization: offer of supporting facility as executive association and industrial sector association and member recruitment
- 9) Consulting on introduction support: construction of industrialist and specialist in various field, and introduction of human resource

However, called one stop service, it does not mean to gather all office of the supporting organization in the center. It is impossible to arrange everything because of the limit of narrow space, members, budget and facilities. The system that small and medium enterprise can enjoy the function of one stop service under such restriction is necessary.

Therefore, the combined method of “service facility directly treated” at that point and “service facility by intermediation”. The latter is the facility to intermediate outside organization though it is impossible to treat at that point, and the combination of the former and the latter is preferable.

The administrating method of the center is to build up general information and to divide roughly following 4 categories according to visitor's object. Those are "management consultation", "procedure of permission and approval", "consultation on the law" and "consultation on privatization". Among these, "management consultation" has the most general facility, becomes the collective window for intermediation adding to the fundamental management consultation. Management consultant (management instructor) executes service to select and introduce appropriate supporting organization in the city in necessity through the interview with the visitor.

For this judgment of management consultant, composite knowledge on enterprise management and on administrative supporting organization is necessary, it is necessary to train and bring up intensively the management instructor for this purpose in short time.

(9) Reference Books on Enterprise Management Published in China

Furthermore, for the sake of management support, reference books on management recently published in China are introduced in below.

[Reference books] (For 2001/3/1)

"Management and development of small and medium enterprise" Zhen Naibai, Economic management publisher, 1999/3

"The 21st century: Development of Chinese small and medium enterprise": Luo Guoxun, Social science literature publisher

"Small and medium enterprise system and market economy": Edited by State economic and trade commission (training department, small and medium enterprise division), China peoples university publisher, 1998/10

"Research on small and medium enterprise": Edited by Lu Guosheng, Shanghai financial and economical university publisher, 1999/8

"Magical power of small and medium enterprise driving- small but rich": Commercial weekly magazine company, China city publisher, February 1999.

"Market for small and medium enterprise and business": Xiang Run and Gao Yuan, Enterprise management publisher, 1998/12

"Modern enterprise management diagnostics": Han Guangjun and Zhou Hong, Beijing economic college, 1995/4

"Modern enterprise administration case study selection": Edited by Wang Fanghua, Fudan university publisher

“Sales strategy in market and application”: Hou Yan, Li Chu et al, China prices publisher

“Enterprise administration and consulting”: Peng Zhigui, He Mingdao et al, China economy publisher

“Practice of enterprise management”: Edited by Li Ping, Geological publisher, 1996/8

“New concept of modern business and strategic business administration”: Edited by Wang Chenan, Airplane industry publisher, 1997/9

“Modern enterprise management consulting”: Han Guangjun, Central race university publisher, 1997/3

“Brocade bag 68 of privatized enterprise management”: Liu Jinxing, Xiyuan publisher

“Modern market sales study”: Lu Yilin, Yang Yanling et al, Qinghua university publisher

“Example of market sales”: Edited by Fu Ping and Gan Chunling, Qinghua university publisher

“Example of market sales management”: Edited by J.Holland, translated by Li Xiaotao et al, Machinery industry publisher

“Theory on enterprise continuous development”: Liu Ligang, Economic management publisher, 2000/1

6.5 Information Network Service

6.5.1 Information Network Infrastructure of Shenyang City

(1) Overall Situations

The information technology promotion of Shenyang City is considerably advanced. There were 70,000 Internet subscribers at the beginning of 1999, and they are increasing to 200,000 people now. It is assumed that 100,000 companies join the Internet in Liaoning Province and 50,000 companies in Shenyang City in the coming two or three years.

The network infrastructure of Shenyang is steady and stable. This city rapidly advances construction of optical cables, and ranks the top five in the whole country. The computer education begins in junior high schools, and universities have reinforced their computer faculty and department. Their other faculties educate computer literacy for business.

The relevant parties in the city are confident in information technology promotion enough to expect great effects. The reason is that there are steady basis of software and

hardware, good research infrastructure, and therefore a sufficient room of IT applications. Advantageous conditions in Shenyang district are cheap labor cost, high education level and abundant human resource. However, it is thought that international cooperation is necessary for promotion of information technology spread.

To bring up the software industry at the city, province, and the nation levels, the preferential measures for enterprises are as follows:

- 1) The income tax is exempted for two years, and becomes half the price in the third year.
- 2) The land tax is reduced from 12% to 3%
- 3) The land and office are exempted from taxes for three years, all summing up of personnel expenses is permitted as expenditure, and the company is authorized to decide the salary.

The financing preferential measures of banks for the software industry is also necessary, and it is welcomed for Japan to go into this district to bring up IT industrial venture capitals

The competition in Chinese information promotion fields is very harsh. Shenyang City needs to quicken the network construction to promote information technology spread. Three implementations are advanced concurrently in Shenyang City as the information network plans for small and medium enterprises. The first is to start a Shenyang small and medium enterprises information network belonging to the Economy and Trade Commission in the city.

The second is a “Shenyang district service net” at the province and city levels as a part of the PP net that the national Science and Technology Committee sponsors. This net has already been operated. The third is E-Commerce Co., Ltd. established in the Federation of Industry and Commerce in May 2000 to target service for private enterprises.

This Study Team proposes to advance the information network with the Shenyang small and medium enterprises information network center under the control of Economy and Trade Commission. However, it is also necessary to concurrently cooperate with the other two networks.

(2) High-and-New Technology Development District

Shenyang City establishes high-and-new technology development district by the investment of the country, and is trying to maintain the investment environment.

Especially, Shenyang City welcomes computer-related investments, and schedules to make the city a base of computer hardware. Concretely, a plan of personal computer production of 1,200,000/year (for export) is progressing jointly with Sanboa in South Korea, and the factory is under construction in the high-and-new technology development district.

Shenyang City is already in a dominant level in China for software. The one third of the Northeastern University graduates works for Japanese software business. Also a lot of influential software companies exist.

The 95% of enterprises in the development district is small and medium enterprises. Since the development district was established in May 1988, it has the history of 12 years. The industrial production in 1999 amounted to 157.6 hundred million Yuan and 161.3 hundred million Yuan adding technology export, etc. The profits are 15.6 hundred million Yuan without tax subtraction. It is an increase rate of 30% a year. The number of enterprises increases every year, and several ten companies are newly established in a year. It reaches 3,000 companies now though the number of companies was 400 to 500 in 1995.

The incubator system is also provided. An entrepreneur is supported step by step at establishment stage in the incubator to make production afterwards in the development district. If it fails to grow an enterprise in the time limit of four years, it has to go out of the development district.

(3) Chinese and Japanese Information Technology Promotion Project

In 1998, the State Planning Commission, the Ministry of International Trade and Industry of Japan, and the CICC have began to collaborate a Chinese and Japanese information technology promotion project (initiation by Jiang Zemin) including six projects of agriculture, medical care, education, remote control, etc. Shenyang City information technology promotion committee is involved in three aspects (agriculture, medical care and education).

- 1) Agriculture-related subjects: The equipment is purchased from NEC. China and Japan shear costs in halves. The project constructs a farm village network to notify

agricultural technology (cultivation method) and economic information (price and policy). The farmer individually accesses the net of 300 computers set up in the public office in the village. The number of villages is two hundreds and several tens. Shenyang City also participates in this project. However, computers can be set up only at the city level because of the short of budget. The information center expects to cooperate with Japan and to mediate a Japanese-Chinese joint-venture proposal, if any.

- 2) The plan committee in the city promotes medical-related subjects: The network connects Republican hospital in Beijing, Jinqiu hospital in Liaoning province and the hospitals in Tianjin to confer on the medical care. It gives priority to image technology and operating in real time.
- 3) Education-related subjects: Remote education and learning is tried with the budget of 250 million yen. Aoyama Gakuin University, Northeastern University (Shenyang), and the Fudan University (Shanghai) participate the network and connect with each other. Toshiba Corporation supplies the hardware. The CICC bears the cost of hardware and software by one half, and the State Development Plan committee and Shenyang City by another half. The image processing technology is regarded as important.

(4) Northeastern University

The information science and process engineering college is one of eight colleges of Northeastern University, and has a scale of 360 staff and 3,200 students. The college is divided into two faculties of:

- a) computer scientific technology, and
- b) control theory and process.

The computer scientific technology faculty ranks a top class in China. The college has 14 departments and one experiment center, and has been changing from an education center in the past to a research center. The computer science laboratory belonging to this college studies:

- a) Computer software and theory
- b) Computer application technology including the information network
- c) Computer system design

The educational-industrial complex is created as the state plan. The Chinese Academy of Science founded Natural Science Foundation started various international collaboration projects, and has advanced them in cooperation with the Ministry of Education in Japan, Kyushu University, Fujitsu Ltd., and IPA. The intercourse with the United States, Canada and Hong Kong has also been included. This university is doing the project with Baoshan Iron and Steel Works in Shanghai, Fangzheng (Beijing) etc..

Northeastern University developed data base retrieval software “MUFO” for general industries, and has delivered it to 400 to 500 users. The delivery destinations are mainly railway or logistics industries including export to Australia and Canada. The sales amount to 4 to 5 million Yuan.

(5) Software Companies

1) NEUSOFT Corporation

We visited NEUSOFT Corporation that is one of the enterprises in the high-and-new technology development district. First of all, we were surprised at the wonderful environment (wide area of the site and modernity in the building), and next at the differentials with the other small and medium enterprises that we visited for enterprise diagnosis.

The salary of the software engineer of this company is about 20 times more than that of the employee of traditional small and medium enterprises. The development environment of software is also excellent. However, the features of work seem much similar to those of the subcontractors in Japan. If the company gets rid of the features of the subcontractors, its power will be a threat for Japan. The first domination of present China software industry is the differentials of personnel expenses with advanced countries, and the second is quality and amounts of the engineers.

The NEUSOFT Corporation has NEUALPINE (joint venture of Northeastern University (NEU) and Japan Alpine Company; development of car-navigating equipment software), NETS (NEU Network Company: middleware development), the NEU Information Industry Investment Company, and the Dalian NEU Information Technology College, etc. They have the capital of 5.6 hundred million Yuan and total assets of 22 hundred million Yuan. The main work offers solutions and exports the software for telegraphic communication, electric power, social insurance, and digital medical care (The virtual manufacturing center: cooperative

development of built-in software by US, Japan, Germany and China), etc. to domestic markets, Africa and Europe.

2) Shenyang NTC Computer Engineering Limited Company

Shenyang NTC Computer Engineering Limited Company was established by investment of 100% from Japan NTC in 1996, and is located in Sanhaojie (electronic town). The company connects the network with Japan and mostly develops the software for mobile communication covering from detailed design to maintenance after delivery (accounting for 80 to 90%). The delivery destination is their headquarter in Japan.

Afterwards, we asked to participate investigation works to this company, and experienced that the manner of works is trained good for Japanese business and technical grade (documentation and network technology) is so high. We realized that software companies in Shenyang are influential as Japanese companies business tie-up partner.

(6) A Software Company in Beijing: Chongke Fulong Computer Technology Co. Ltd

This company was established in 1998 by Computer technology research institute in China science academy with collaboration of Legend Co. Ltd and is located in Zhonguan village. Company size is not so big as 70 engineers, but a half of members are shifted from China science academy and technological level is considerably high. More than 50% of engineers have master's degree and more than 20% have doctor or higher qualification. Principal field are centralized to package software for CAD/CAE, supporting software for plant design, Web relating software but also it deals with system integration as management information system, office automation, decision support system and management resource planning etc.

The investigation team ordered the application software of pilot project to this company and recognized that business procedure level is not lower than Japanese company and technical level is very high. We purchased two software packages from this company. "One stop homepage developing tool" has more than 40 quotations and near to 30 were soled out. "Web data searching engine" is adopted to 2001 Universiade in Beijing. This company supplied also information system for Univesiade and almost completed in June in 2001.

6.5.2 Needs of Enterprises Claimed on Survey Visits

(1) Questionnaire Survey

According to the enterprise visit questionnaire, 32 companies use the Internet and e-mail among 64 companies that answered, and 13 companies execute the online order receiving and issuing. The expectation for the information network was 22 companies against 44 companies and human resource information for 45 companies and sales information for the research and development, and information. As many as 13 companies demanded on the policy renewal like deregulation, procedure simplification, etc. Next, 8 companies demanded the preferential treatment plan in financial aspects. On the whole, SME hopes the municipal administration prefecture achieves the information network where they do not manage the enterprise but they devoted themselves to support.

The summary of demands entered in the free description column is as follows.

- 1) Information-related matters: Provision of consultant information, support to information spread (funds, computers and human resource education), regular update information, etc.
- 2) Policy-related matters: Simplification of enterprise establishment procedure, emphasis policies preferential treatment for environmental industries, offer of foreign capitals and joint chances, establishing differences for bringing up part industries, deregulation, abolition of differentiation and equality of competition with big enterprises, etc.
- 3) Finance-related matters: Fund information for small and medium enterprises, offer of technology innovation fund, offer of short-term fund, etc.
- 4) Management- and technology-related matters: Bringing up of enterprises in scientific technology field, offer of collaboration information, effective use of property, etc.
- 5) Market-related matters: Offer of market analysis or forecast information, advertisement of products, information on new technology or materials, etc.

(2) Situation of Enterprises Found on Survey Visits

- 1) Considerable numbers of small and medium enterprises introduce personal computers into the accounting section.

- 2) A lot of small and medium enterprises have one networked personal computer or more. However, it is not always used, and remains covered. Only when needed, it is used for access to the Internet and for e-mail.
- 3) Some enterprises use CAD.
However, for instance, the following considerable unbalances are seen in the usage.
- 4) The mechanical design is longhand though electric design is CAD (due to engineer's skill difference).
- 5) Two-dimensional drawings are for the manufacturing drawing though design is made using three-dimensional CAD (due to skill difference with workshop employees).

(3) Problems on Information Technology Promotion of Small and Medium Enterprises

- 1) A concrete, positive work as the enterprises is necessary though the expectation for information spread from the enterprises side is great. An administrative side should execute the support plan to bring up the information technology promotion together. In the current state, the gap between the expectation matter of the enterprises and the content of the service of the administration is great.
- 2) In general, the small and medium enterprises have a lot of passive attitudes that stand on the reception side for information. However, an aggressive character that stands on the information sending side is necessary by all means. This leads to demonstrating the soul of pioneering in the market generally missed to the small and medium enterprise in the Shenyang City, and the bringing up of this business mind is a big problem.
- 3) As for the contents of the information technology promotion in each enterprise, the differentials between the enterprises are great, and the applications in the enterprises are much left to take their own course. Therefore, it will be a subject to make the grand design for the entire small and medium enterprises in Shenyang City and to establish the policy of the information technology promotion that the executives of each enterprise target.

6.5.3 Information Obtained from Survey of Policy Group

(1) Information Port in Shenyang City

The applications of the information technology promotion that the city targets include many things such as finance, taxation, commodity prices, economy, labor, administration of justice, police, and so on. In addition, the city handles installation of public relations monitors, IC card spread, personal computer production, establishment of software companies, and others.

The Shenyang City information center was established as a subordinate organization of the planning committee in the city in order to advance the information technology promotion of the city. The IT port setup plan has been developed rapidly under the five-years plan. It has already completed nine information network projects concerning the administrative affairs, economy, statistics, finance, financing and taxation system, scientific technology, education, trade, and city construction. Currently, it constructs 12 databases concerning the statistics, finance, enterprises and products, commodities and market information, human resources, population, scientific technology information, educational teaching materials, regulations, national and municipal administration, image information, and social and public information.

The actual homepage of the city is fairly good so that we can guess that they have high development ability for the software. The enhanced contents of the homepage contain an introduction of the Economy and Trade Commission, newspaper's news in general (update of every day), the latest policies (state, other provinces and cities), economics in general, topics (project introduction and opinion), etc. The current version puts information in newspapers and magazines as it is. In addition, it has variegated contents like well-informed scientific technology, economic trends (Shenyang City and other provinces), forecast analyses, industry trends, inside and outside trades, policies, regulations (state and Shenyang), government ordinances, instructions (since 1992), enterprise reformation topics (expert's opinions), foreign experience information, enterprise introductions, exhibition guides, etc.

There are three networks in the Shenyang City. They are the economic trade information network, the Chinese technological venture Shenyang net, and the Shenyang small and medium enterprise information networks.

(2) Economic and Trade Commission Information Center

The subject of the Economic and Trade Commission information center is to establish the economy and trade information network under the control of the Economic and Trade Commission. This information center develops so many databases fully using the resource of the Economic and Trade Commission. Establishment of the economy and trade information network is centered as the subject. The homepage had acquired URL, and opened the test operation to the public. (<http://www.sjmw.com>).

On the economic and the trade information network, it scheduled to handle the database concerning the results of new technology, human resources, problems of enterprises, facilities, etc. The completion of the database was at the beginning of 2001.

This information service center is an affiliated association in the city, and is operated as an incorporated enterprise with the technology mediation fee. It aims at independence by offering information with high value.

The promotion plan for information network of this investigation team was supposed to execute with Shenyang E-Commerce Co., Ltd. as the core at the departure from Japan but was determined to promote together with this center as the core because that this center's Shenyang SME information network plan fits well to our purpose and is also subsidiary of our counter part.

(3) Chinese Commodity Exchange Center

It turned out that there was an organization named the Chinese Commodity Exchange Center in the Federation of Industry and Commerce, and, centering on this organization, government-owned big enterprises in China had already realized a world of e-commerce.

A system has been completed on an exclusive network to retrieve commodities on a nationwide scale and settle selling contracts and money. We had an actual homepage shown. More than 100,000 companies have the membership in the whole country. The privatized world is advanced more than expected.

Liaoning sub-center of the Chinese Commodity Exchange Center (abbreviation CCEC) was at first the subordinate of the Economy and Exchange Commission of the Nation, and took charge of achieving e-commerce. However, it was privatized, and is a joint-stock company now.

Electronic commercial affairs companies have been established in 36 places of each province now. Overall, information spread progresses in the unbalanced state in China. The information centers have already been established at the level of the prefecture in the south.

The headquarters company of the Chinese Commodity Exchange Center located in Beijing, and its sub-center in each province, direct control land and autonomy district. There is a branch in each city, and a sub branch in each prefecture. The related companies are set up in Far Eastern Russia, Singapore and Hong Kong. Under the headquarters company, there are members exceeding 100,000 companies in the whole country. Membership is either government-owned, large- and medium-sized enterprises, enterprises whose budget is based on the expense of the Financial Affairs Division or large enterprises operating across the districts.

The sub-center in the Liaoning province was established in 1998. At that time, the restructuring of government-owned enterprises confused the matter. Therefore, it has finally been completed at the end of 1999. Due to special circumstances of Liaoning Province, it started use from big business. That is, its use has begun from steel, food, and oil business, and allows sales, settlement and procurement on the network.

The network reaches a fairly high level for practical use. It can be said that it has been completed on a relative scale. The net has settled the contract with four government-owned banks (People's Bank, China Bank, Industry and Commerce Bank, and Construction Bank) and allows the electronic money settlement. This network is based on the exclusive lines for connecting the enterprises, and independent of the one that individuals can access. It has high reliability, performance, and security.

(4) Shenyang E-Commerce Co., Ltd.

Shenyang E-Commerce Co., Ltd. (in Federation of Industry and Commerce) was just established in May this year to target service to private enterprises. China aims at making to the market economy. It is understood that privatizing government-owned enterprises leads to favorable results. Moreover, private enterprises also increase rapidly. Since the Federation of Industry and Commerce targets the private enterprises, decision was made to establish the E-Commerce Co., Ltd. in the Federation of Industry and Commerce.

It is thought that service to private small and medium enterprises also goes well since know-how accumulated at the Chinese Commodity Exchange Center is applicable.

However, it seems that consideration to security is a little insufficient to handle e-commerce for individuals.

(5) PP-net

A part of the PP-net that the State Science and Technology Committee sponsors is “Shenyang District Service Net” built on the level of the province and the city. The PP-net in the state level serves variegated information on the network, which the National Science and Technology Committee have stored.

Services for the small and medium enterprises include the following items.

- 1) Actions against difficulties of small and medium enterprises
- 2) Consulting on new technology and products for small and medium enterprises

Advice is given on human resources, capitals, advertisement of products, state policies, etc. as the service. The main work of the productivity center includes introduction to the projects of the state and city. It raises the projects on the network, supports the application procedure of the enterprises, and works for examination and coordination.

In the year of 2001, it aims at enhancement of the network, and will have the plan to achieve the support of product design and development. It also schedules to establish the small and medium enterprise dynamic league (including human resources), which cooperates with the design center of the laboratory and big enterprises (equipment manufacturing) in the whole country.

The users are 30,000 companies (1,500 companies in Shenyang) in the whole country, and the service items are 2,000,000 (7,000 items in Shenyang). The information is shared nationwide. It aims at 100,000 companies (5,000 companies in Shenyang) in the coming two or three years and 1,000,000 companies in 2005. This is the only nationwide net that the government assists.

The PP net is basically for the small and medium enterprises. Though the net opened in 1999 in Shenyang City, 1,200 companies and 7,000 items have been registered in one year.

The service menu contains the following items.

- 1) Solution by tender of difficult problem of small and medium enterprises

- 2) Human resource information (500 people are registered in Shenyang)
- 3) Financing information from the inside and outside the country
- 4) Opening of achievement information on enterprises to the public
- 5) Consulting to plan project

As the result, the applications for funds have been proposed by about 200 companies of the small and medium enterprises. Among them, 100 companies have made their homepages of the enterprise introduction and opened them to the public.

(6) Computer Education (Shenyang city vocation technology school)

1) Content of training

Computer software operation: learning of operations includes the Internet connection, Chinese character word-processing software, E-mail, Office-97, -2000, and Windows-97, -2000.

2) Effects of training

Those who finish training, take the test and pass it receive the bond of the beginner's class skill authorization, and get the completion certificate from the Bureau of Labor. The figure of re-finding employment is about 60% as the rate. The training course where the finding employment rate is the best is sales technology. However, the applicant to this course is the fewest. Most of the applicants hope for the course of computer software operations so as not to miss the fashion. However, training the computer operations for one month does not actually make competing potential of the enterprises. So, the finding employment rate is the lowest.

6.5.4 Problem on Shenyang City Information Network Service

(1) Problem on Information Infrastructure in Shenyang City

- 1) Network infrastructure is insufficient for the overload capacity at access concentration time, and it is necessary to take urgent countermeasure against this problem. It is necessary to invest money for this.
- 2) High-and-new technology development district attains splendid results, but it is necessary to plan and to practice for capital-intensive industry promotion because the field is restricted to labor intensive industry at present.

- 3) Chinese and Japanese information technology promotion project has just started and reached at the stage of adjusting ground conditions but it is afraid that proposition from Chinese side is short.
- 4) Information education in the university is fairly high level and sufficient attribute to society but it is desirable to improve technical exchange inside and outside of the country.
- 5) The grade of software companies is very high in the field of manufacturing. The improvement of planning and designing capability is challenge in the future. To attain this, it is necessary to upgrade the information needs of total society but it is also necessary to improve maker's capability.

(2) Problems of Various Information Centers in Shenyang City

- 1) The city information port is providing the functions as the information sending-out center. Therefore, the problems in the future will be securing of regular access users. Therefore, it is necessary to maintain posture to dedicate to freshness and service of information. Moreover, the arrangement and integration understanding user's standpoint will be a subject, though various menus are now being developed for common citizens, industries, venture industries, small and medium enterprises, etc. The cooperation and role allotment with other information centers will be another subject in the future.
- 2) Though the China Commodity Exchange Center has already functioned on a relative scale, the actions to expand the scale and respond to the internationalization will be a subject in the future. That is, the work for disclosure to the international will become important.
- 3) Achievement should serve the network to acquire the user ahead of that though E-Commerce Co., Ltd. aims at e-commerce since it seems that it takes time. The competition and cooperation with the information network for other small and medium enterprises are problems.
- 4) Since Shenyang district service net is under the control of the PP Net and has now valuable information centering on high-and-new technology, it occupies a dominant position. It is a subject how to open service to general enterprises in the future.

- 5) The computer operation education is currently in a situation not suitable for the market trend. It seems a cause that office automation (OA) of the government office and enterprises in Shenyang City is too late. The improvement of the education menu is a subject, for example, by combining the computer education with the business capability education such as accounting and clerical work processing.
- 6) It is necessary to make an effort to stop useless competitions and realize mutual cooperation, since two or more information centers with a similar purpose are established and operated. Each information center should make the best use of its own characteristic respectively, and concentrate on securing of the access users. It is necessary to set up a business plan how to make a basis for profits as an information center.

6.6 Surveys on State Level SME-Related Organizations

- (1) High-Tech Development and Industrial Application Office of Department of Science and Technology

This Office is responsible for four areas, i.e. information, automation, new materials and energy, and controls R & D on and the practical application of high technologies. R & D activities are promoted and controlled by means of the project method. The Office is in charge of 53 development zones nationwide, including three high-tech development zones in Shenyang, Anshan and Dalian in Liaoning Province. Among these, Shenyang has a special role to play as a model city for the transformation of traditional industries to high-tech industries through the reform of enterprises as proposed by Prime Minister Zhu. The basic involvement of the Department of Science and Technology is the examination of proposed projects to provide financial support for good projects.

There are three ways of achieving industrial transformation as described below.

- 1) Development of traditional industries to new traditional industries with the application of high technologies
- 2) Transition to high-tech enterprise-led industries cutting out traditional industries
- 3) Converted use of assets (human resources, real estate and equipment, etc.) of traditional industries

The following responses are feasible in relation to the above-mentioned industrial transformation.

- 1) Enterprises specializing in high technologies will only need to think about themselves and will not face any problems.
- 2) SMEs collaborating with large enterprises will adopt high technologies in line with the adoption of high technologies by large enterprises.
- 3) There will be enterprises which grow in their respective business fields without using high technologies.

The Department of Science and Technology also supervises almost 600 productivity promotion centers nationwide, contributing to the promotion of SMEs. The Department has established the SME Innovation Fund to encourage inventions by SMEs. It spends RMB 1 billion a year for this purpose and has so far provided funding for 1,500 SMEs.

(2) Development Strategy and Regional Economy Research Division, Research Development Center of State Council

This Center is not simply a research institute but is the administrative brain which formulates draft economic plans for China. China's SME promotion master plan is being formulated based on the concept produced by the Center. At present, the Center is drafting the SME Law for the purpose of its promulgation in May 2002.

Meanwhile, the APEC aims at achieving the following objectives in Southeast Asia, led by Japan, China and Korea.

- 1) Upgrading of the economic base
- 2) Promotion of the application of IT
- 3) Promotion of SMEs

In 2001, a conference of the SME ministers of APEC countries will be held in Beijing and the Center has been participating in the work to determine the agenda for this conference. The planned theme is SMEs in the age of informatization and networking. While the Center provides diverse services, including consultation and training services, as a government organization, it gives the highest priority to its information service, sending out various information through the Internet. According to the findings of the questionnaire survey, training is requested in regard to development strategies, CAD and accounting in that order.

(3) Beijing Municipal Science and Technology Commission

The role of this Commission is the promotion of science and technology as a municipal government organization, encouraging and assisting inventions and innovations in IT/high-tech industries, environmental protection industry and agriculture (biotechnology).

In Beijing, 97 – 98% of all enterprises are SMEs which account for 55 – 60% of the GDP. The Science and Technology Enterprises Fostering Project commenced 20 years ago and Zhongguan Village, the largest high-tech park in China, was created under this project. At present, some 8,000 enterprises are operating in this high-tech park, all of which started as SMEs and some of which have grown to become large enterprises. 10,000 high-tech enterprises currently exist in Beijing. The Beijing Municipal Government is implementing the following measures to support science and technology type SMEs.

- 1) Fostering of incubators (30 incubators by the end of 2001)
- 2) Provision of business start-up funds for SMEs by the state government with planned funding of some RMB 200 million (Beijing receives 15%)
- 3) Establishment of three credit guarantee funds for SMEs
- 4) Establishment of a productivity promotion center to assist the productivity improvement and human resources development by enterprises
- 5) Establishment of a technology trade market (to enable SMEs to obtain the necessary technologies and to sell the technologies owned by them)

(4) Nengyuang Economic Research Institute of Quinhua University

- 1) Research on 3 Es

The 3 Es are energy, environment and economy and research is jointly conducted with Keio University in Japan. This research project is the fruit of a meeting between Chairman Jiang and Prime Minister Obuchi two years ago. Energy and the environment are studied by one group and economy is studied by another group. One theme of the economic research is SME development policies. The work commenced in 1999 and the macroscopic problems of SMEs were studied in that year. A study mission was sent to Japan to visit banks, public corporations and social organizations in addition to 10 enterprises. The theme for 2001 is the SME finance system, featuring central government policies from the macroscopic point of view and the concrete problems of SME finance from the microscopic point of view.

In 2001, cash flow-based management is included in the scope of the Study and strong interest is shown in the cash flow-based management support tools provided by the Study Team in Shenyang.

2) Simulation

As part of the study on SME development policies, a simulation exercise on the theme of “mathematical research and demonstration regarding indirect finance for traditional enterprises” is being conducted. This simulation intends the creation and demonstration of a dynamic game model involving the government, commercial banks and SMEs. The target of this simulation is the achievement of a return of 1.0 or higher for investment in SMEs. The simulation is extremely complicated and data to demonstrate the validity of the model is required. It is planned to use data from Wenzhou for demonstration purposes. If necessary, a Japanese company may be entrusted to conduct this simulation. Verification of the model with Japanese data is hoped for during a visit to Japan. The anticipated results of the model are (i) the identification of such important factors as loan interest rates, insurance premiums, risks and investment amount and (ii) the quantification of their impacts.

(5) Science and Technology Development Division/Overseas Division, Industry-University Joint Committee of Qinghua University

1) This committee is an upper body handling joint work between industries and universities and organizing exchanges in the upper stratum. Meanwhile, the Science and Technology Development Division is responsible for the provision of multilateral services for enterprises in terms of negotiations, contracts, planning and design. The Overseas Division is in charge of cooperation with abroad. By October 2000, the amount of contracts agreed totaled more than RMB 400 million. Under-graduates, post-graduates and teachers at Qinghua University are actively involved in business activities and the university authority backs such activities.

2) Industry-university cooperation (sales amount): Fangton – RMB 1.6 billion, Ziguang – RMB 0.8 billion, total – RMB 3.2 billion

3) Support for SME Surveys

Qinghua University celebrated its 90th anniversary in April 2001 and established a business club for SMEs to mark this occasion. The establishment of a Japanese branch is planned. The alumni association of Qinghua University has some 300 members in Tokyo and is very active.

6.7 Industrial Application of High Technologies

6.7.1 Shenyang University

Shenyang University which is situated in Dadong Ward has 10 departments and 14,000 students. It has 52 offices and 290 important research projects and has received financial support totaling RMB 36 million in the last three years from the state and provincial governments. At present, the engineering offices are conducting research on the application of the R & D results to produce products and are earning income through the sale of products which have been developed based on the research results. These offices are given the collective name of a torch type science research institute by the municipal government.

The Study Team observed the results of three mature research projects out of 46 research themes. One of these is a pump which is capable of feeding high density liquid over a long distance using a diaphragm. The parts are ordered from SMEs in Shenyang and are assembled at the office. Several dozens have already been sold with the profit going to the university. Another product is a high quality welder. The marketing of heat resistant materials with a metal coating device using the vacuum technology is also planned. These research projects are contributing to the industrial development and promotion of SMEs in Shenyang. The university is hoping to send its staff to Japan for training purposes to upgrade the technological level at the university.

<Note> The Shenyang Municipal Institute of Technology is a different institution to Shenyang University and is constructing a university techno park which aims at becoming a science and technology park for equipment industries. This park plans the development of 10 priority businesses relating to industrial measurement and control, mechanical plants, specialist NC machining, metal surface treatment, alternative energies, die manufacture and permanent magnetic motors, etc. with a view to establishing a technology innovation base characterized by the development of modern manufacturing technologies, an incubator base for service and technology-oriented enterprises, a funding base, a human resources development base, an information gathering and dissemination base and a product trading base over a period of 3 – 5 years. The target number of incubators and projects are set at 200 and 600 respectively.

6.7.2 Main Research Institutes

(1) Shenyang Automation Research Institute of Academy of Science of China

This Institute was established in 1958 and has been constantly engaged in R & D activities to upgrade and develop automation in industries. Since the 1970's, it has been at the forefront of the world's development of automation technologies. It conducts research on robotics and enjoys advantageous status in the fields of automation, scanning line technologies for TVs and surveying technologies.

The Institute has 600 staff members, including 200 senior engineers who have a degree in mechatronics engineering, pattern recognition or intelligent systems. As an affiliated body of the Institute, the Robot Engineering Center was established in 1989. This Center is the sole research facility for robotics. It is described as “the cradle of robotics in China” and has been developed as a base for the R & D and industrial application of robotics in China. Under the 863 Program, the National Robotics Technology Center, the Robot Laboratory and the Intelligent Robot Technology Center have been integrated with the Institute as bases for advanced industrial technology development.

The Institute sponsored the establishment of the Shenyang Robot Automation Co., Ltd. which is now manufacturing and marketing automated welding machines and various robots.

The criteria adopted by the Institute to judge its development is the constant improvement of the social reasons for the Institute’s existence and the speedy improvement of its economic strength. Since its establishment, the Institute has implemented more than 1,000 scientific research projects and has won more than 200 national science and technology awards. It has established a cooperative relationship with many research institutes and enterprises in CIS countries (Commonwealth of Independent States), the US, Korea and Japan, etc. and conducts diverse activities, including joint research, the exchange of technology and trade. Several underwater robotic vessels capable of diving up to 6,000 m below the surface developed by the Institute have been sold overseas.

(2) Shenyang Casting Research Institute of State Department of Machine Industry

Established in 1957 and belonging to the State Department of Machine Industry, this Institute is the only research institute for casting in China. It has 500 staff members, including 300 intermediate and high-class engineers. Its premises cover an area of 80,000 m².

The Institute has seven departments and has produced 600 research results. The research themes used to be assigned by the state government but now consist of those entrusted by enterprises based on their own market research findings. The main areas of research are machining, aircraft and water pumps for hydropower generation, etc. Within the framework of this Institute, there are 15 auxiliary organizations, including the Casting Research Institute of the Machine Society of China, the National Technical Committee for Casting Standardization, the Mould and Important Castings Control and Inspection Center of the State Department of Machining Industry, the Casting Materials General

Corporation of China, the Nationwide Casting Information Network and the Shenyang Casting Technology Promotion and Development Center. The Institute also has an editing and publication office for bulletins of the Casting Engineering Society and periodicals on casting research. It is preparing for the opening of a portal site for business matching based on casting market information with a target date of August 2001, indicating its active approach to business operation as well as academic exchanges.

The Institute also produces cast steel and aluminium die castings at the Press and Casting Technology Department of the Shenyang Casting Research Institute which is affiliated to the Institute.

An aluminium die casting factory was established in 1989 as a pilot factory of the Casting Research Institute and preparations are in progress to change it to a joint equity enterprise. Its premises cover an area of 50,000 m² and it has an adjoining cast steel factory. It has three casting machines, i.e. a 600 ton machine made in the Soviet Union and 400 and 160 ton machines made in China. This factory was granted ISO 9002 certification in 1994. Its products are automobile parts and components for electrical appliances and the metal dies are usually supplied from outside. One order placed in the past by an American company involved the manufacture of hubs for car wheels.

The factory hopes to enter into a joint venture or partnership with a foreign enterprise and has the following advantages.

- 1) The required investment amount will be small.
- 2) As a factory affiliated to a research institute, its development ability is good. It is capable of improving its technologies to meet the required international level. The latest information throughout the world can be obtained from the research institute.
- 3) The Chinese side will provide the necessary land, buildings and manpower while the investor will provide technologies and equipment.
- 4) The factory is examining the possibility of a joint venture or partnership with a Taiwanese enterprise established with Hong Kong capital.
- 5) As the manufacture of cars in Shenyang is expected to reach 200,000 units a year in the near future, there will be a fairly large demand for aluminium parts.
- 6) The factory is capable of manufacturing engines, transmissions, steering components, parts, aluminium wheels and accessories.

(3) Metal Research Institute of Academy of Science of China

This Institute was established in 1953 and is a famous research base for material science and engineering in China. Mr. Li, the current director, is the fourth director of this Institute.

Its research work mainly focuses on new metal materials, inorganic materials and their composite materials with special emphasis on micro texture and processing technologies to study the performance of these materials. The Institute has strived to combine material research and engineering in the pursuit of the development of ordinary as well as new materials, taking their functions and structural elements into consideration. In this manner, the Institute has been constantly producing useful results for the development of material science and the building of the national economy. The current operation of the Institute is described as “one major field and two wings”.

Entrusted by the Metal Society of China, the Material Research Society of China, and the International Center for Material Physics and the National Natural Science Fund, the Institute edits and publishes four academic periodicals, i.e. the Bulletin of the Metal Society, the Bulletin of the Material Research Society, Material Science and Material Technologies. The Institute has established a research partnership with wide-ranging partners, such as research organizations, academic bodies, well-known scientists and enterprises, in 30 countries, including the US, the UK, Germany and Japan, to promote international academic exchanges and partnerships.

The Institute has an annual budget of RMB 100 million and the staffing strength has been cut from 1,000 to 300, including 100 – 200 researchers.

There are many research results with business potential.

- 1) Carbon pipe with a hydrogen storage and emission function
- 2) Anti-corrosion stainless steel
- 3) Special metal for dental implants
- 4) Concentration of zinc and other by-products of gold mining
- 5) Development of nano-size materials
- 6) Development of ceramics with a honeycomb structure

(4) Shenyang Research Institute for Applied Super Vacuum Technology

Mr. Wang, the founder, used to be a staff member of the Academy of Science of China and has experience in the design and application of the applied super vacuum technology. He is a leading engineering the super vacuum field and has established this science and technology-oriented private institute in line with the social shift to an age of scientific progress.

Since its establishment, this Institute has met the conditions for the accelerated growth of a private enterprise, featuring vacuum technology physics, membranes, new materials, solid state emission and space technology, etc. with the passionate support of experts and university teachers.

With the significant boost for its research and equipment manufacturing capability by such support, the Institute was able to manufacture super vacuum equipment, parts and small scientific research devices, etc. immediately after its establishment. At present, the Institute is involved in research work for the 863 Advanced Scientific Development Program, state level research projects, National Science Fund projects, space technology projects and the High-Tech Industry Development Project. Its products, such as integrated super vacuum equipment, enjoy a good reputation as they are less expensive than comparable equipment manufactured abroad. The share of such equipment in the domestic market is extremely high.

Using the scientific research facilities at the Institute, 100 master's degree or doctor's degree students have completed their theses. Many of the Institute's research results have been published in leading scientific journals abroad. The Institute has been entrusted to conduct research work by Hong Kong City University and Qinghua University and has received an order for a super vacuum system from Oklahoma University. The low cost is one of its advantages in addition to its technological excellence.