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Economic Restructuring and Regional Development in Hokkaido^{1) 2)}

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I. Outline of the Japanese Economy

In 1945, after the Second World War, Japan had to start again from ruins. By introducing the priority production system, she seized the chance for rapid recovery of production. Japan was able to enjoy low cost, abundant energy and materials from abroad for industry and also was given an opportunity of access to foreign markets, in particular the US market due to IMF order and a fixed exchange rate of 1\$ = 360 Yen.

Owing to these lucky circumstances, the Japanese economy was able to achieve rapid growth in the 1960's. In 1973, an oil crisis occurred. Japan's economic system based on low price oil had to shift into a new price order. Japanese heavy and chemical industries' period of rapid growth had ended. These huge energy consuming industries had done R & D for energy saving technology and invested heavily into anti-pollution equipment.

The adopted rationalization measures contributed to cutting cost and productivity improvement. Factory automation (robotization) and office automation have been developed through micro-electronics technology. These high-technologies were introduced into not only big business, but also small and medium-sized companies in Japan. These quickly introduced high-technologies have given new competitive power to Japan in the world market. Trade friction between Japan and the US had already started in the late 1960's. Trade friction between Japan and the EC happened almost simultaneously. Today Japan stands in a triangular state of trade friction.

In the fall of 1985, the ministers of finance and presidents of the central bank from five advanced countries (G5) had a conference. After that event the Yen rate (1\$ = 220 Yen) began rising rapidly to an all time high level (1\$ = 122 Yen). Trade friction and the high Yen rate had injured Japan's economic power. In 1987, almost all Japanese companies, especially heavy industry companies, suffered from huge deficits which were the highest levels in their history. Japanese companies began to cut the over-production capacity to cope with the high Yen rate

1) This paper was presented to Second Annual Hokkaido Univ. / Portland State Univ. Faculty Research Symposium, Portland, Oregon, in April, 1989.

2) The author is particularly thankful to Professor Koji Taira, Univ. of Illinois, Fulbright Visiting Professor, for his valuable advice though the author takes the whole responsibility of the article for himself.

recession. This process was called rationalization.

II. The Hokkaido Economy Today

Post Second World War Hokkaido has made big contributions to Japan as a supplier of energy, industrial materials, food and so on. However in 1960, the Japanese central government changed the energy strategy from coal to oil. Due to this energy revolution in the 1960's many coal mines in Hokkaido have gradually been forced to shut down. In particular the high Yen rate during these years has destroyed the domestic coal's competitive power against imported coal.

In 1987, all coal mines started to take rationalization measures in order to cut costs. In the same year Mitsui-Sunagawa's mine was shut down. Because of this 839 employees lost their jobs. And Hokutan-Mayaji's mine was also shut down. 1005 employees lost their jobs. The Sorachi district, a narrow coal mining valley in Hokkaido, is now filled with jobless middle-aged and advanced aged workers. (*Table 1, Table 2*)

The Japanese steel industry got off to a sluggish start in 1987, but business began to cheer up going into the second half of the year. With the strong Yen recession, the outlook for the industry at the beginning of 1987 was dimmer than in previous years. To cope with the recession, the steel companies introduced and implemented rationalization measures on a larger scale than ever by discarding production equipment and trimming work forces. Furthermore with the increasing awareness of a gradual downturn in steel demand, the steel companies stepped up their diversification efforts by entering new businesses in non-steel related fields.¹ (*Fig. 1*) With regards to employment, the five major steel makers' plans call for trimming their work force by a total of nearly 40,000 workers by 1988-1990. In order to secure employment for their employees, the companies stepped up efforts to enter new businesses while at the same time introducing such measures as training programs and partially paid leaves under the employment stabilization law. At the end of 1987, employees in the steel industry decreased to 314,000 from 338,000 one year earlier.² (*Fig. 2*)

Nippon Steel Co. has an integrated steel mill in Muroran city. This works has a history of 80 years producing pig iron and several types of steel products. Muroran people have been proud of their prosperity as a steel town, the only representative industrial city in Hokkaido. The steel industry is very important to Muroran city. (*Table 3, Table 4*) But due to rationalization measures for productivity improvement 1,082 employees lost their jobs as of July 1987. Furthermore at the end of March, 1990 the only active blast furnace (iron making process) and LD converter (steel making process) will be shut down in order to concentrate the production base of Nippon Steel. As of February 1, 1987, 8,275 persons in total were employed by the company and its subcontract companies in Muroran city. But after shutting down the blast furnace and LD converter, 50% of the employees will lose their present jobs.

According to field research, Muroran city hall foresees that 5,000 persons will leave from the Muroran district, thus income from municipal tax will reduce by 1.1 billion Yen and the unemployment ratio will rise to 10% in the estimated worst case.³ Since 1973 the year of the oil shock, owing to overcapacity of shipping, the

market for new ship building disappeared. Hokkaido's ship building industry was directly affected by the shortage of demand. The number of employees in the industry has been reduced from 2,600 (in 1976) to 900 persons (in 1986). Only about 1/3 of the employees remain with the companies.⁴ The construction of a highway network and motorization have decreased the traffic demand of the Japan National Railway (JNR). JNR has been suffering from a huge amount of deficit. On April 1987 the government-owned JNR was privatized and divided into six private companies. The new private company in Hokkaido has employed 14,334 persons (only 51.5% of the 27,800 employee from the old JNR). 2,700 jobless persons are still waiting for new jobs.

The voice calling for the opening of the Japanese market for agricultural products (e.g. powdered milk, peanut and others) has become louder day by day. The main products of Hokkaido's agriculture are exactly the same as these. Even today, farmers in Hokkaido are suffering from huge amounts of deficit and loan. If the domestic market will open to foreign suppliers, the farmers will be bankrupted sooner or later.

The Forestry Agency in Hokkaido will reduce employee numbers from 11,900 (in 1987) to 5,000 (in 1992) for rationalization purposes. But the economy of small towns and villages in the mountain area are supported mainly by this industry. The sudden emergence of unemployment of 6,900 persons will bring about the destruction of the local community.

The fishery industry is facing the 200 sea mile territorial water issue and regulation of northern-sea fisheries. These severe conditions have made Hokkaido's unemployment ratio the highest in Japan. (*Fig. 3, Fig. 4*) Hokkaido's gross local production in the fiscal year 1985 was approximately ¥12.889 billion, accounting for 4% of Japan's total (¥321.15 billion). 7.0% of Hokkaido's income is earned from primary industries, 24.1% from secondary industries, and 72.0% from tertiary industries. Hokkaido's industrial structure inclines toward primary and tertiary industries as compared with Japan as a whole. (*Table 5*) The percentage for the manufacturing industry is 1/3 of the Japan average and the construction industry's percentage (12.1%) is bigger than the machine industry which means that the Hokkaido economy's infrastructure is supported strongly by public investment from Tokyo. Even if there were sufficient demand for cars or electric goods in Hokkaido, Hokkaido can not enjoy the new employment opportunities because of the lack of factories for those industrial goods within Hokkaido. Several highly industrialized prefectures on the mainland which have factories for cars, electric goods, and so on can create new jobs for these people.⁵

Therefore a large percentage of capital goods and consumer goods are imported from the mainland of Japan. Hokkaido's interregional deficit is always compensated by money flow from Tokyo for development.

Historically, like a colonial zone inside Japan, Hokkaido has been given the role of supplier of food and natural resources to the mainland of Japan. This is the reason why Hokkaido's manufacturing industries especially the machine industry are not so well developed. The raw material oriented industries for example foodstuffs, lumber and lumber products, pulp and paper are actively using locally produced materials. Two big steel works in Muroran were also located there, aiming at the local material (coal).

The traditional primary and secondary industries have matured and are now in a restructuring process, on the other hand new tertiary industries (not making goods but rather services and information) have become active.

The tourist industry, in 1986, attracted 98.32 million tourists (+ 5% compared with 1985). The sales amount was 401 billion Yen. (*Fig. 5*)

The information processing industry made sales 101.5 billion Yen in 1987 (+ 13.5% compared with 1986). The industry employs 8,706 persons (+ 18.4% compared with 1986). It has attracted many ambitious young people to Hokkaido.⁶ (*Fig. 6*) This industry is expected to be a new driving force for the Hokkaido economy. The above mentioned high Yen rate recession had keenly attacked the Hokkaido economy. The bright and dark sides of industries have become clear. Tertiary industries, especially the service industry, are standing in the light.

The problem of unemployment has occurred between these falling and rising industries. A mismatch in three dimensions is the key problem. Those dimensions are skill, age, and region. The most typical example is that of a highly-skilled coal miner who lives in a mining mountain area with his family, but can not enter the new labor market in Sapporo or Tokyo. (*Fig. 7*).

III. Economic Restructuring and Employment

Observing these macro economic conditions, I have developed field research in order to view the real picture of the employment issue in Hokkaido.

This research's outline is presented in *Table 6*. A questionnaire was sent by mail to personnel managers of 106 representative companies from five industries (steel, machine, distribution, hotel, software) in Hokkaido. Research items related to business climate, business strategy, results, personnel management (employment) and application of government policy. In total 32 questions were asked.⁷

(1) Change of employee number in these 3 years

In a Japanese company the number of regular employees is the most important index for personnel management. Men employed directly from school without passing through the general labor market are the standard staff or standard worker. A change of this employee number indicates a change in management policy. Research results are presented in *Table 7*. Steel companies apparently reduced employees. On the other hand, distribution sector (department stores, supermarkets and wholesaling), hotel and software companies increased the number of employees. The hypothesis that the software industry has become a driving force on behalf of the steel industry is testified. Services industries have developed a firm place in the Hokkaido economy.

(2) Surplus labor force in the company

According to the answer for question (1), there is some surplus labor force in the company. Therefore the following question was asked, "Do you have any surplus labor force in your company?" The results of the answers are presented in *Table 8*. Typically 75% of the steel companies have a surplus labor force. The

worst instance has 21–30% surplus. On the contrary, 80% of machine companies, 81.3% of distribution companies, 82.4% of hotel companies and 88.2% of software companies have no surplus labor force in the company. Even according to this result, the steel industry has an overcapacity and is faced with severe restructuring.

(3) Employment adjustment according to high Yen rate and economic fluctuation

The following question was asked, "Do you adjust employment level according to the high Yen rate and economic fluctuation?" The answer is presented in *Table 9*.

In total 41.6% of companies have taken this action. Typically in the steel industry with over-production capacity, 83.3% of the companies adjust the employment level.

50% of the distribution industry make adjustments. In Hokkaido, summer is the high season for the tourist industry. The hotels adjust employment, matching seasonal cycles. 23.5% of hotels make an adjustment of employees. And even in the rising software industry 29.4% of the answering companies make adjustments.

(4) Adjustment methods for surplus labor force

Management must seek not only maintaining the business but also improving the business itself. By optimizing the man-job system, the manager must try to bring out the full potential of employees. Adjustment methods taken by management are shown in *Table 10*. Traditionally the Japanese company does not want to dismiss any employees even at a time of recession. At the first stage, management regulates the amount of over-time work to reduce labor costs. The second stage is to cut part-time or casual workers. The third stage is to take job displacement inside the firm. The fourth stage is to reduce young graduate recruitment. Today management uses multiple rationalization measures. Personnel management also uses multiple methods simultaneously. To maintain the employment of regular employees, management uses job displacement inside the firm (20.2%).

As for reducing the regular employees, management controls the recruitment of young graduates (15.2%). Instead of increasing the number of regular employees with life-time employment, management employs part-time or casual workers. Because it is easy for management to adapt business to economic conditions with a flexible labor force (10.8%). Nowadays, Japanese companies especially big business take job displacement outside the firm. Usually big business has many subsidiary or related companies. Management puts the surplus labor force on this network. Displacement, in Japanese "Shukko", has become an increasingly popular personnel method (8.2%). In these last 10 years, new business dispatching labor force has occurred. One company has a contract with this type of company to get the necessary labor force. There is no direct contract between the company accepting the person and the dispatched person.(6.3%) In Japanese society, the inter-firm labor market has gradually started to play a prominent role.

(5) Education and training programs for job displacement

If there is not so much business during the economic slowdown, companies must seek new jobs outside the present workshop to secure employment.

In the Japanese company, job displacement is nearly equal to job rotation as the most popular method for rationalizations. But for the employee he must move from a familiar job to a new job in another workplace. The new job requires new knowledge and skill. Therefore the following question was asked, "Do you have any education and training programs for job displacement?" The results are shown in *Table 11*. In total 53.8% of the companies have a program in various forms. On-the-job training (OJT) inside the workshop is most often put into practice (34.4%). Off-the-job training (Off-JT) is 9.7%. Sending employees to a training program outside the company is also 9.7%. But 41.9% of the companies have no program for transferred employee.

(6) Education and training program for middle-aged and older employees

In the previous paragraph I have pointed out that the unemployment problem in Hokkaido has a three dimensional mismatch. These are skill, age, and region. The young generation can more easily change their jobs. But middle-aged and older employees who have polished their abilities in a special field for more than twenty years. They are specialists in one field. But if they are transferred from their present profession to a different type, they could not use their polished abilities and accumulated experiences. Therefore another question was posed, "Do you have any education and training programs for middle-aged and older employees?" The results are presented in *Table 12*. In total 58.7% of the companies have some kind of program. As in the previous question, OJT is the main method (14.4%). Off-JT inside the company accounts for 7.7%. Off-JT such as participating in seminars outside the company accounts for 13.5%. Correspondence courses conducted by some institution accounts for 9.6%. It is remarkable that the percentage of programs outside the company is larger than inside. It means that programs inside the company are not always enough for employees who will be transferred. Self-development plus no program accounts for 52.9%. This means that the individual is finally responsible for his own professional ability development.

(7) Necessary labor force for new business development

Macro economic restructuring appears in each business field as withdrawing from the non-profit making business, investment into new business, and entry into the new market. Almost all steel companies want to go into non-steel businesses and set up a new business as an all-round industrial materials supplier. New business development needs a new type of labor force different from the traditional type.

Therefore the following question was posed, "What kind of labor force is necessary for new business development in the future?" The results are presented in *Table 13*. Mass-production, mass-marketing, and mass-sales have already lost their effectiveness in today's affluent society in Japan. The market situations have completely changed. Consumers' needs have shifted from standardized mass-production goods to high quality order-made goods. Business strategy must aim

at not only the production process and technology, but also at the market. These situations are recognized clearly by companies. A market-oriented basic stance appears clearly necessary. Product planning, product developing and marketing staff (28.2%), salesmen (24.6%), engineers for R & D (21.8%), and managers (11.8%) are necessary. All professions are not related directly to the production process. Highly talented specialists in the soft field are necessary.

(8) Lifetime employment system

Post Second World War Japanese big business introduced the lifetime employment system while negotiating with the enterprise-based labor union. A young man who is employed directly from school is placed as a regular standard employee. His job is secured until retirement time (ordinarily 55 years old). Rapid economic growth has benefited both the company and employee. The employee could enjoy job security, promotion and good wages. Even the steel industry, a key industry twenty years ago, can not supply jobs to the employees in the firm. According to the collective agreement the company will supply jobs, but the employee must go to the workplace wherever the company places them. The meaning of lifetime employment has already changed in actual situations.

The lifetime employment system is regarded as a main subsystem of the Japanese management system by foreign scholars. Not only the executives but also union leaders have been proud of it. Therefore the following question was posed, "What do you think about the lifetime employment system in the future?" Results are presented in *Table 14*. Some change but to continue (68.8%), existing state will continue (13.0%), in total 81.8% foresee the continuation of the lifetime employment system in some form. But it is quite interesting that the steel industry, an old key industry, does not foresee the continuation of this system. On the contrary, booming distribution, hotel, and software industries do not foresee the complete elimination of it.

IV. Economic Restructuring and Regional Development

I have discussed the unemployment problem in previous chapters. In this chapter I will discuss solving this problem through regional development, mainly by the local government.

The central government, the Hokkaido prefectural government, city hall, towns, and villages are seriously worried about this problem. Above all, small towns and villages in the distant local area will disappear due to the outflow of jobless workers and their families. According to a Hokkaido local government survey, public organizations (city hall et al.) have taken several methods for activating the industries and business in the local area; (1) set up a new institution for R & D of new technology and new goods. Set up new production facilities. (2) finance supporting for commercialization. (3) set up a tertiary sector enterprise. (4) bringing up and securing man power (especially engineers). (5) offering know-how and information for commercialization. (6) creating business groups for commercialization. (7) education and training for executives and managers. (8) promotion of entrepreneur group activities. (9) others (master plan for industrialization, marketing etc.). The percentage of these adopted

methods is presented in *Fig. 8*.⁸ For more than thirty years, the academic world and governmental circles, through industrial policy in Hokkaido should have led the diversification and high advancement of industries. Unfortunately, these topics have only been discussed in the same pattern. From primary industry to secondary industry, from secondary industry to tertiary industry, namely step-by-step industrial advancement has been lacking in Hokkaido's economic history. Without full development of the manufacturing industry, tertiary industries have developed quickly. Entrepreneurship is alive in the field of service industry. For the strengthening of the local economy, interrelations between different types of organizations and industries are quite important. The supplier and consumer relationship is quite necessary to keep the economic values in the local community. Therefore the balanced structure of economy is the key for sound development in the local areas. The Hokkaido local government wants to reorganize business circumstances for the industry making value added as high as possible. This means that investment for R & D is indispensable.

In the same survey another question was posed, "What type of industry do you want to develop for job creation?" The results of answers (multiple choice) are presented in *Fig. 9*. 79.7% of local public organizations aim at the tourist and leisure-time industry. Next, 75.0% of them aim at the production industry for agricultural, forestry, and marine goods. All these industries take advantage of affluent natural resources in Hokkaido.⁹

I have developed an original survey. The framework is presented in *Fig. 10*. Development of one project contains five (Idea making, Planning, Organizing, Start-up, Management) stages. In relation to each stage, a questionnaire containing 26 items in total was sent to the 211 local public organizations' officers who are in charge of regional development. The ratio of collection is 52.1%. Sample size is 108. The survey was carried out from September 20th to October 30th 1988.¹⁰

(1) When was the idea born?

Generally speaking an idea had better to be matured over a long period just the same as wine and brandy. Now all projects are put into practice. For launching a new project the time of preparation is quite critical. The idea's birth year is presented in *Fig. 11*. Sixty-eight ideas (71.6%) were generated since 1982. It does not pay to be rash. After mature deliberation and strategic planning, one can do things with self-confidence. It is a desirable tendency to spend enough time for adequate preparation.

(2) Idea-maker's profile

What kind of individuals or organizations generate the ideas for regional development? The results of answers are presented in *Table 15*. In total ninety-eight ideas were generated. Sixty eight ideas (69.4%) were made by staff inside the public government office. In detail, managers made 36.7% and regular staff made 22.4%. It is noteworthy that ten directors (mayor or deputy mayor) made ten ideas (10.2%). In a local community the leadership role is played by top level government in a step by step manner. The strata of age sixty years and above generated 18 ideas (28.1%), forties generated 28 ideas (43.8%) and thirties

generated 14 ideas (21.9%). This means that the middle-aged manager who is responsible for the task earnestly made efforts to perform his duty.

On the other hand, from outside the public government office, a total of thirty ideas were proposed by individuals or organizations. In the big city it is difficult for public office to accept inhabitant's individual opinion. In a small local community, inhabitant's face to face relationship is now still alive. Bureaucratic treatment is not so highly systematized. Inhabitants and their groups could propose sixteen ideas (16.3%).

Consultant companies located in Sapporo or Tokyo could do their business with their own intellectual information abilities. Two cities did launch big projects on a national level under the guidance of the Tokyo central government.

(3) Project for regional development

Based upon a unique idea, a concrete development plan must be created. Therefore one question was posed, "What kind of development plan do you have?" The results are presented in *Table 16*. Setting up sight-seeing, recreation, sports equipment and facilities accounts for 47.4%. Laying out a new park (13.7%), resort development (6.3%), harbor and beach adjustment (4.2%). All these sight-seeing, leisure-time related plans total 71.6%. Necessary conditions for the leisure-time related industry are an affluent natural environment. And the high-touch characteristic of this industry will create more job opportunities for the local community. In this sense Hokkaido has an advantage.

Nowadays, Japanese companies make direct investments into foreign countries and locate new plants there. Actually it is difficult for Hokkaido to invite new investment for factories and industrial facilities from Tokyo in these high Yen rate business circumstances.

Acknowledging these conditions, Hokkaido people want to invest in tertiary industries. But over-investment will bring out excessive competition due to the limited market size. Each project must seek out new strategies of differentiation.

(4) Project planner's profile

"By whom was the idea made into a concrete plan?" The results are presented in *Table 17*. Just as with idea makers, public government office managers and regular staff are active. By strata of age, forties are very active and thirties follow them. Outside the office, consultant companies (located in Sapporo or Tokyo) supply the know how. Public offices order the project planning from consultant companies.

The job of planning for regional development is classified into the following;

- (a) Public office staff make plan independently
- (b) Cooperation between the public office and consultant company
- (c) Cooperation between the public office and inhabitant's organizations
- (d) Cooperation between the public office and private company
- (e) Cooperation between the public office and institution
- (f) Tertiary sector organization makes plan independently
- (g) Private company's own business

Ordinarily in the process of idea and information gathering, the staff of the public office have contact with inhabitants and several kinds of professionals. This

will affect the next step. In almost all cases the planning will be developed with the cooperation of staff and outside related persons.

Problems of planning for regional development are pointed out as follows;

- (a) To gather as many unique ideas as possible from different points of view inside the public office
- (b) According to principle of participation by inhabitants, in which way does the staff accept presentation of problems and new ideas from inhabitants?
- (c) From where can the staff obtain the necessary professional knowledge, know how, and information? Is there a charge or is it free?
- (d) It sometimes happens that many plans are made at the same time. These plans must be put in the field of evaluation of multiple dimensions. By putting priority on one selected plan, the staff must use the limited resources <man power, materials, budget, information, space, and time>.
- (e) How does the mayor trim public organizations? The way of introducing the active power of the private sector for regional development is indispensable.

(5) Inhabitants' consensus formation and disclosure system

The basis of self-government is the autonomy to decide on one's own life. Bureaucracy is apt to manipulate people by the use of secret information. Defending one's own privacy, people must ask the government to disclose information for their own happiness in life. Usually a regional development plan is related to the inhabitants' life no matter how direct or indirect. Consensus formation for regional development is very important. Therefore another question was posed, "Is there any disclosure system in the self-governing body?" The results are presented in *Fig. 12*.

Unfortunately now only 9.3% of the bodies have it. In Japanese society, the disclosure system has begun only in these last ten years.

A second question was posed, "Is there any preparation for a disclosure system?" The results are presented in *Fig. 13*. In total 52.8% of the bodies are preparing for a disclosure system in the near future. Inquiring into accurate problem solving, data, and information is absolutely critical. Gradually the importance of this point has been understood by the bodies.

(6) Voluntary inhabitants' group for regional development

Often local business circles, for example the chamber of commerce & industry, have direct economic interests in the regional development. They often propose some plan to the city hall. But they are too directly involved in business itself. They can not always think about the matters objectively and with an open mind.

On the other hand, voluntary inhabitants' groups have no direct economic interests in regional development. They can think about the matters from a more objective point of view. They have a keen consciousness on the level of quality of life. The existence of these groups is an index for the activation level of the local community. Therefore one question was posed, "Is there any voluntary inhabitants' group for regional development in the local community?" The results are presented in *Fig. 14*. These groups are active in total in 58.3% of the local communities (public administration unit). And the main active members' professions are as follows; shop keepers, farmers, entrepreneurs, salaried men, staff

of city hall, house keepers, fishermen, school teachers, and so on. Shown in *Fig. 15*, 66.7% of the groups have made proposals for regional development. They have played an important role of consensus formation in the local community.

(7) Institutional regulation by central government

Japanese society is governed by a one law system based upon the Constitution of Japan. Only one law is applied to all different types of local communities. But only one law cannot cover and explain the details of the field conditions. The essence of regional development is how to make the most of uniqueness of locality, while at the same time maintaining the ecological system and natural environment. The main target for regional development is how to make the local area display fully its own potentiality. Bureaucratism, the Tokyo oriented way of thinking, is not always suitable for special conditions in the local area. The following question was posed, "What do you think about institutional regulation by the central government?" The results are presented in *Fig. 16*. 11.1% of self-governing bodies think they are very troublesome. 46.2% of them think they are troublesome. In total 57.3% of them find some troubles with the regulations from the Tokyo central government. One century has passed since the Meiji reform. Today deregulation and self-government at the local level are quite important for the happiness of not only the Japanese but of all the people in the world.

(8) Central government administration by sectionalism

Inside the Tokyo central government each ministry wants to enlarge its own territory. They have different principles for the same problem. Officers execute their own plans independent of other departments. Usually desk work does not take care of the problem itself in the local field. But for the person concerned, who is faced with the difficult problems in the field, the range of freedom to make alternatives for problem-solving, the right to put the plan into practice, and the total amount of budget are important. Thus this question was posed, "Do you feel any trouble due to sectionalism in the central government administration?"

The results are presented in *Fig. 17*. "A great deal of trouble" accounted for 12.0%. "Some trouble" accounted 42.6%. In total it comes to 54.6%. Therefore Japan as a noted economic giant must change her highly centralized administration system.

(9) Participation by private companies in development

Free competition in the market is the economic principle of the free world. Government can only make adjustments for market circumstances and encourage participant's fair competition. The private sector has a great influence upon the economy. In this meaning private company's activities are quite important. The following question was posed, "How do private companies participate in development in the local area?" The results are presented in *Fig. 18*. "Active" accounts for 26.9%. "Only for association" accounts for 40.7%. "Indifferent" accounts for 21.3%. The inactiveness is caused by a lack of vigorous entrepreneurship, management strategy, original technology, and fund raising capacity. But the most difficult obstacle for participation is the project's

profitability.

V. Conclusion

To solve these complex and huge problems (employment, regional development), the persons concerned must make efforts to invite autonomous counsel from many persons in setting up a human network spread over the earth. There is no shortcut for problem-solving. Man will solve the current problems step by step. The accumulation of small problem-solving activities will bring out a break-through to the difficulties. Consequently, the unemployment problem in Hokkaido calls for the reconstruction of the local economy. Regional development is one solution to the problem. For the 5.7 million people living in Hokkaido, food, clothing, and shelter are the fundamental aspects of life. Production of goods and services is essential to national and local level economies, also essential is the pattern of production which is undertaken. Pattern means not only horizontal, but also vertical division of work in the domestic and at the same time in the international economy. This is the key-problem.

Companies in Hokkaido must develop a new close and organic relationship as a supplier and consumer of necessary goods and services. This network, like import replacement industry, will decrease the outflow of money and make the reserve inside the local community.

To construct an autonomous Hokkaido economy, companies will not remain in the present business position as a subsidiary, affiliated company or supplier of materials horizontally organized by big business in Tokyo. They will do direct business with other companies in Hokkaido standing on the same ground. In the era of high economic growth, mass-production of standardized industrial goods, mass transportation, mass selling, mass communication, and mass consumption have been linked with each other very effectively. But nowadays consumers need high quality goods and services. And their needs are diversified. Big business production systems are skillful at mass production. Small and medium size companies are at disadvantage for mass production. But they are good at small lot size and wide variety goods and services production. A network of small and medium size companies can correspond to consumers' needs. Small and medium size companies in Hokkaido can easily attend to the consumer's needs and access the market in Hokkaido. These companies must keep the Hokkaido market. Not only Hokkaido, but also the northern part of Japan's islands and mountain districts are covered with snow in the winter season. More than 20 millions people live in twelve prefectures.¹¹ Those people will potentially become friendly consumers of Hokkaido goods. A population of 20 million is the appropriate market size for suppliers.

Technology for life in the cold and snowy winter season must be developed. New technology of this type will develop business chances for companies in Hokkaido.

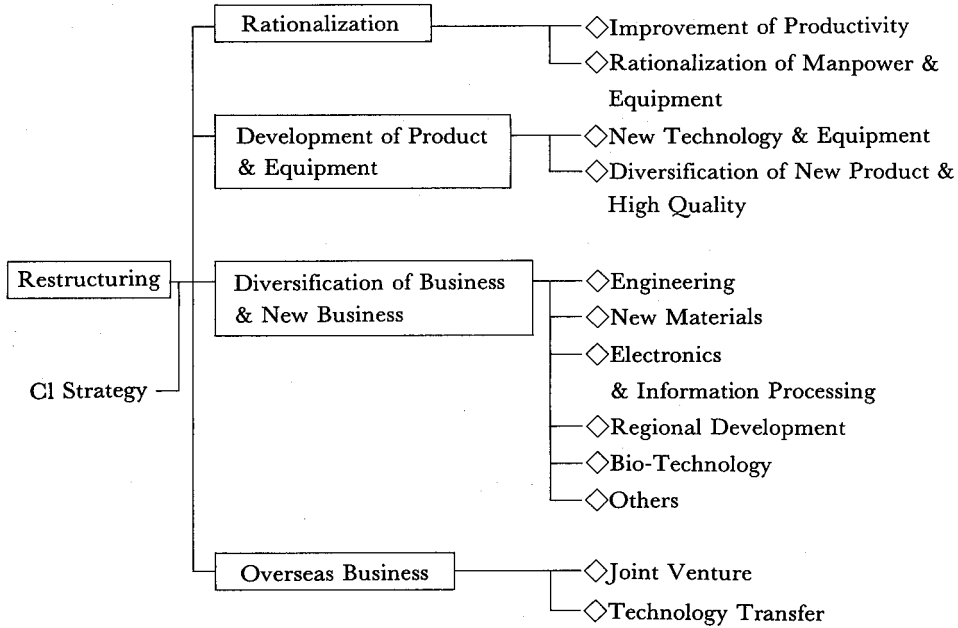
The new concept that local is global must be set up clearly for regional development. By making the best of local characteristics and to realize the high quality of life are the strategies for regional development. For that purpose all wisdoms and know-how of the grass roots must be gathered for planning of

development. This activity will develop the high quality of life as a main product and at the same time create new hard and soft technology as a by-product. (Fig. 19)

Notes

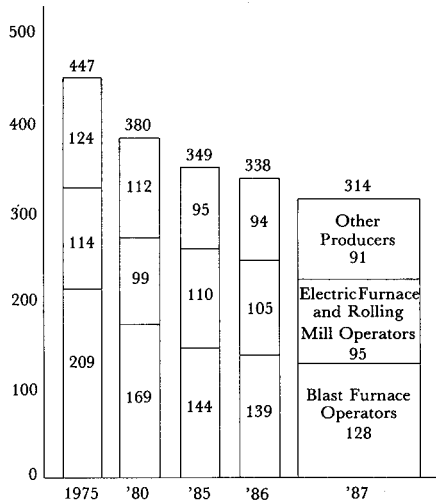
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3. Muroran City Hall, *An Interim Report of Nippon Steel's Rationalization Effects* (in Japanese), July 1987.
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6. Ministry of International Trade and Industry (MITI) Sapporo Branch Office, *Survey of Information Processing Industry in Hokkaido 1988* (in Japanese), Sapporo 1988, p.6.
7. *Report of the Committee on Employment to Hokkaido Productivity Conference* (in Japanese) Yoneyama Kikuji, Chairman, Sapporo, Hokkaido Productivity Center, March 1988.
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10. Yoneyama Kikuji, *Hokkaido's Indigenous Development and Creation of Information* (in Japanese), Hokkaido University, March 1989.
11. Hokkaido, Aomori, Iwate, Miyagi, Akita, Yamagata, Niigata, Toyama, Ishikawa, Fukui, Yamanashi and Nagano.

Fig. 1 Outline of Japanese Steel Industry's Restructuring



[Source] The Japan Iron & Steel Federation (1989),
 "The Steel Industry of Japan & World", P. 7.

Fig. 2 Number of Workers by Industry Sector, 1975 - 1987
 (thousands)



Year-end	1983	1984	1985	1986	1987
Total	363	356	349	338	314
Production Workers	265	258	251	240	221
Administrative and Technical Workers	98	97	98	98	93

Note : These figures are for companies employing 30 workers or more.

Source : Ministry of Labor.

Fig. 3 Unemployment Ratio (Annual Ave.)

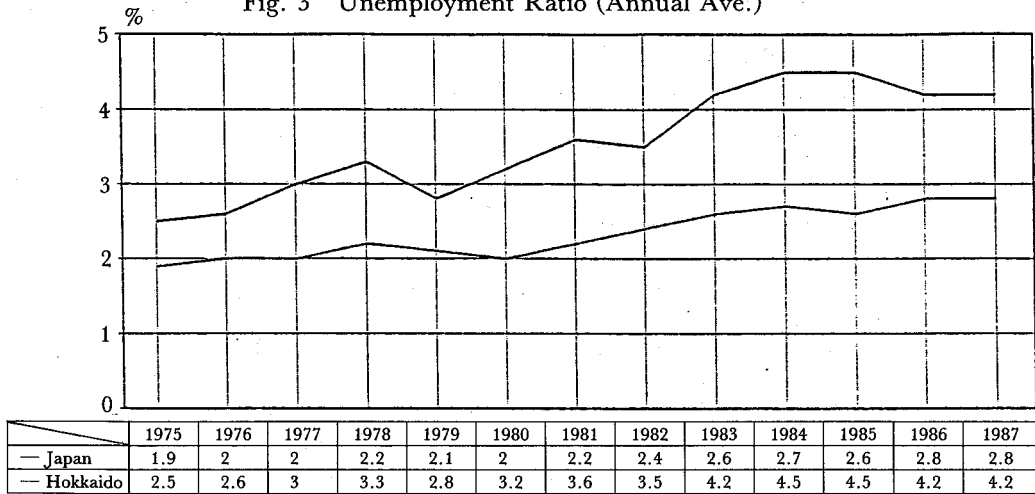


Fig. 4 Effective Manpower Demand Ratio

Dem. /Sup.)

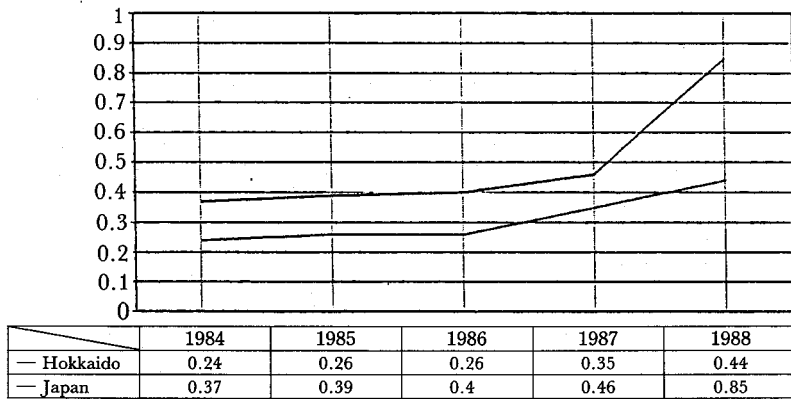


Fig. 5 Tourist in Hokkaido

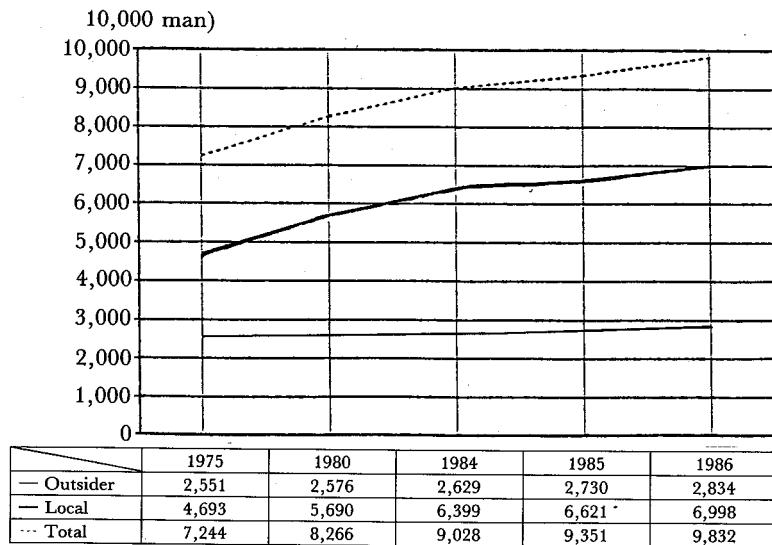
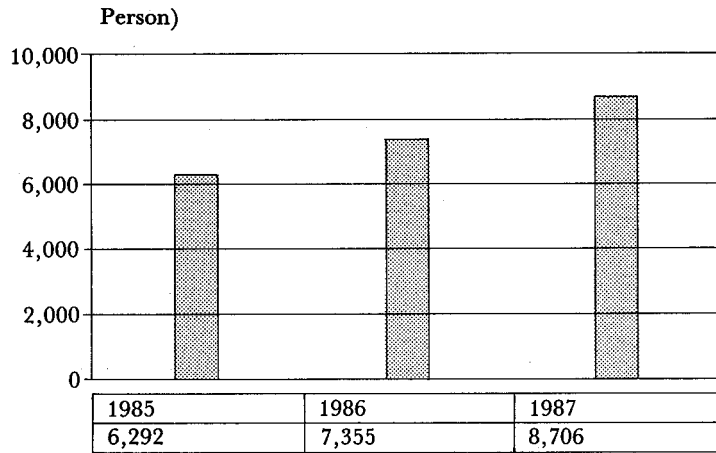


Fig. 6 Number of Employee (Information Processing Industry)



[Source] MITI Sapporo Branch Office :
Survey of Information Processing Industry, 1988.

Fig. 7 Economic Restructuring in Hokkaido

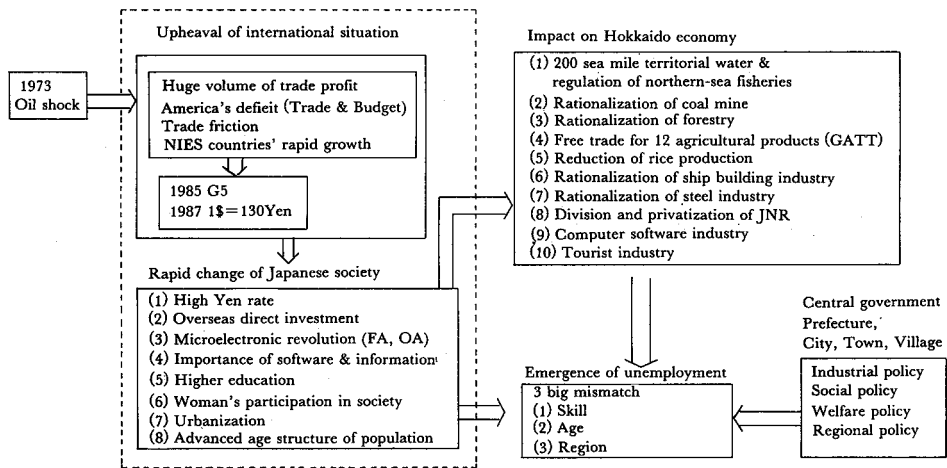
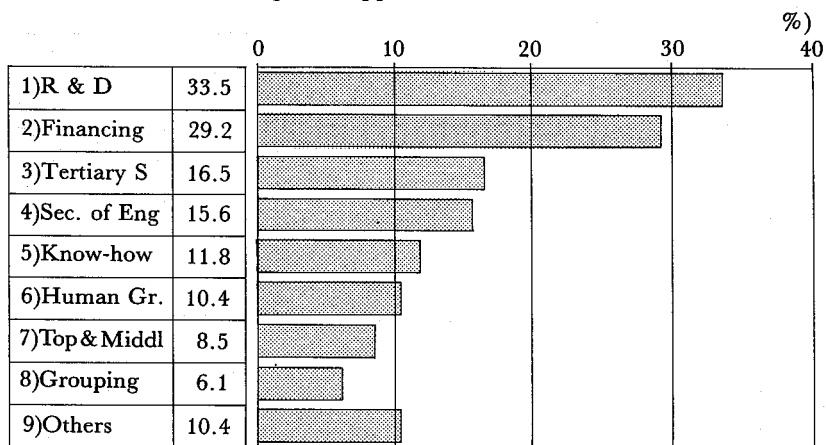


Fig. 8 Approaches to Activation

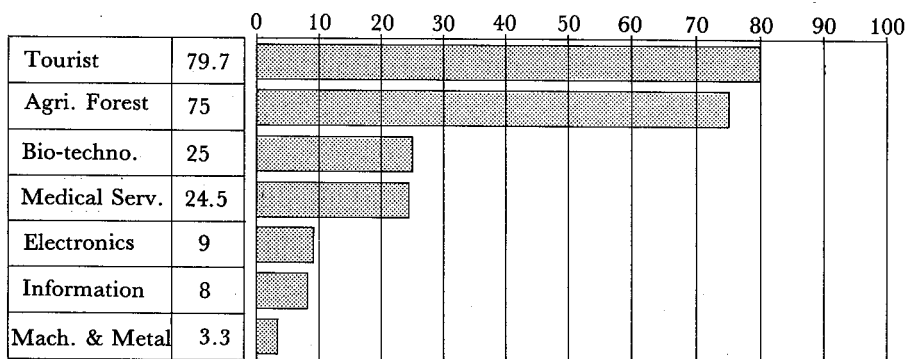


[Source] Hokkaido Government : White Paper of Labor Economy in Hokkaido 1988.

Fig. 9 To Be Developed Industry for Job Creation

(Multiple Choise N=212)

Unit: %)



[Source] ibid.

Fig. 10 Framework of Research

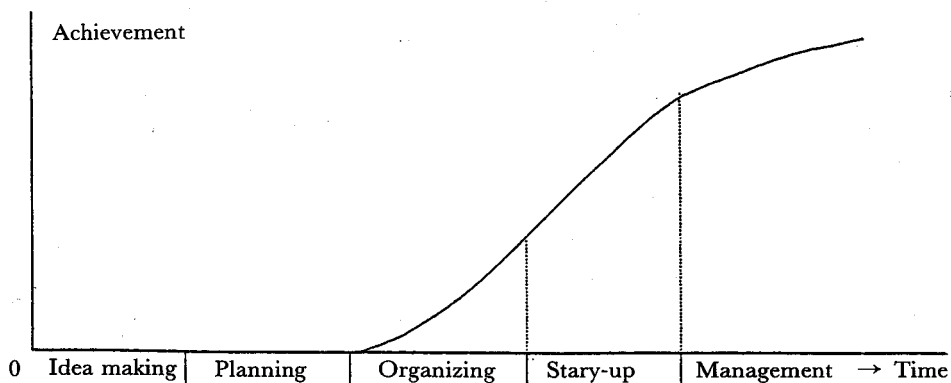


Fig. 11 The Time Idea Came

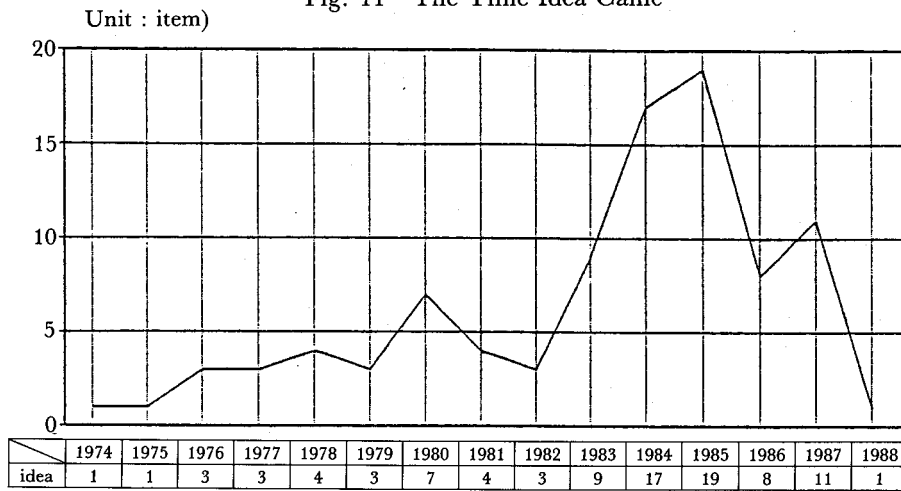


Fig. 12 Disclosure Today Unit : %)

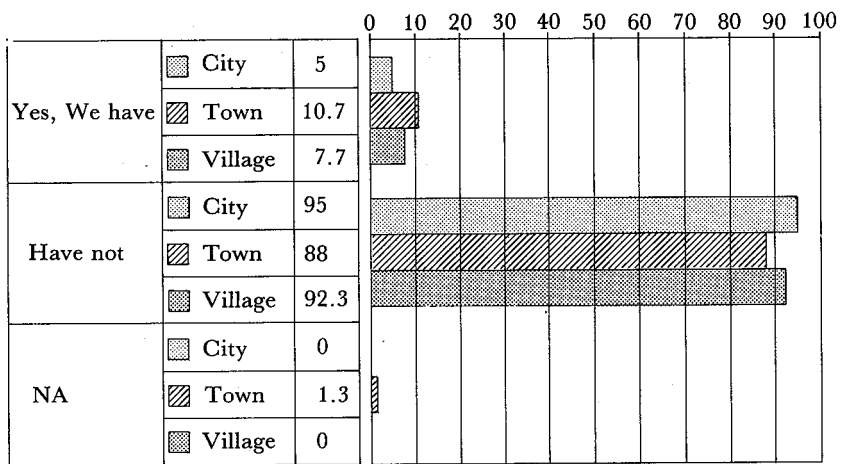


Fig. 13 Preparation for Disclosure Unit : %)

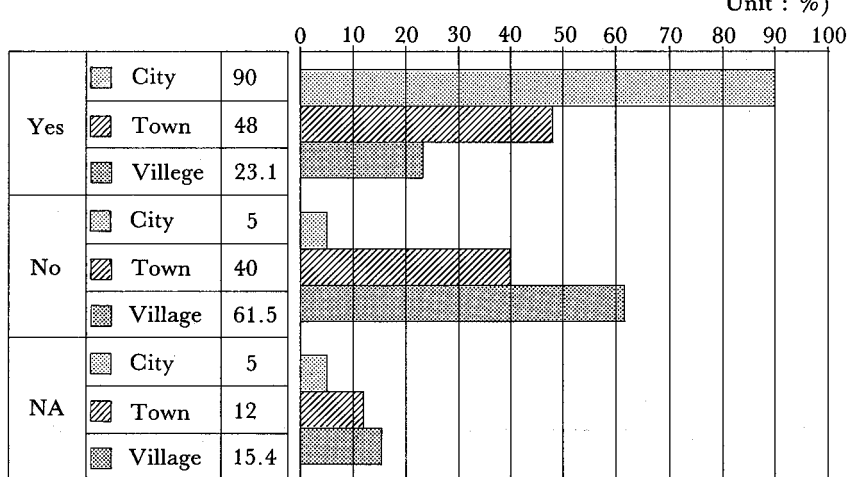


Fig. 14 Inhabitants' Volunteer Group

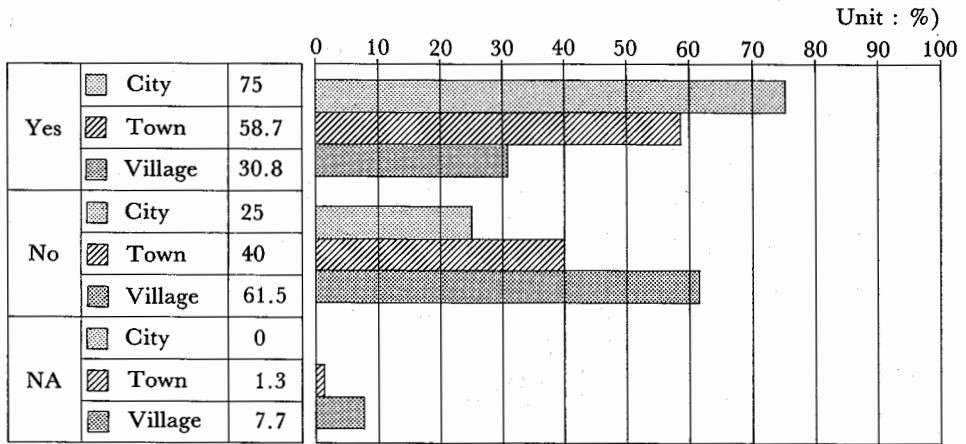


Fig. 15 Proposal by Inhabitants' Group

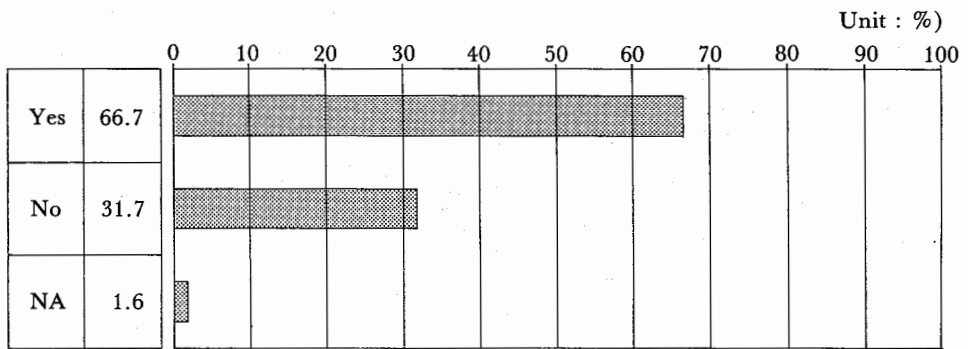


Fig. 16 Regulation

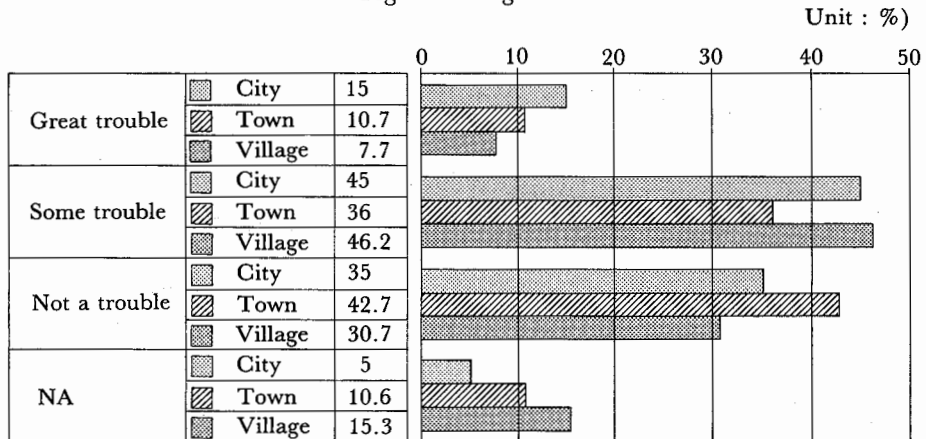


Fig. 17 Administration by Sectionalism

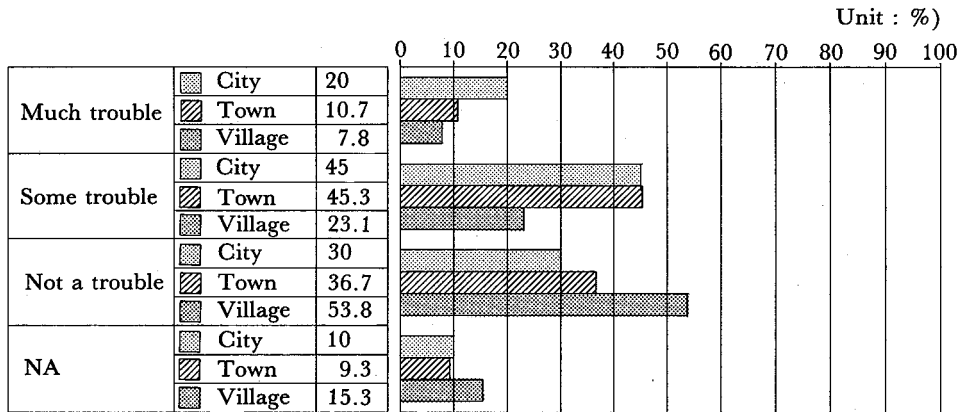


Fig. 18 Participation by Private Company

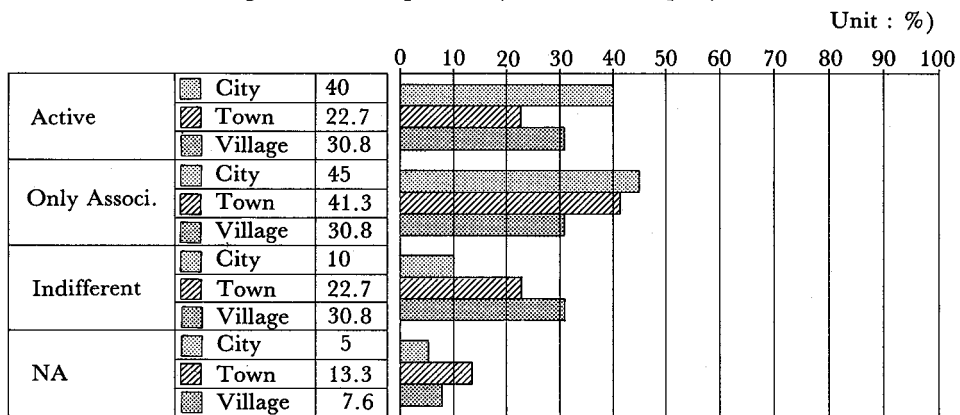


Fig. 19 Handmade Think-Tank

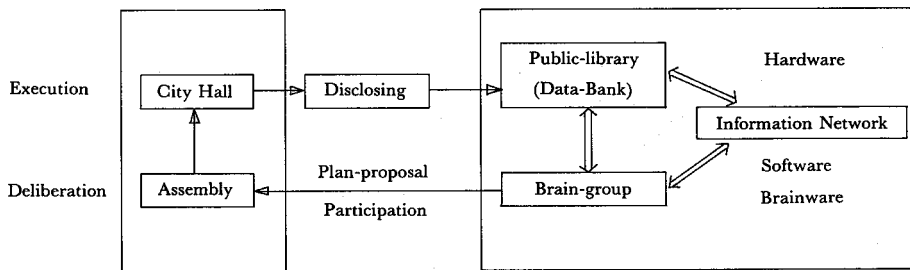


TABLE 1 *Coal Production (1,000 ton)*

	Japan	Hokkaido	
	T. A. P.	T. A. P (%)	N. of M
1984	16,831	10,222 (60.7)	24
1985	16,454	9,791 (59.5)	24
1986	15,200	9,284 (61.1)	24

Note : T. A. P. = Total Amount Produced

N. of M = Number of Coal Mines

Source : MITI(Sapporo Branch Office).

TABLE 2 *Jobless People in Structural Depression Industries*

	Fishery	Marine p.	Steel	Coal	Timber	Ship b.	Non-Steel	Others	Total
Accumulated Unemployment	1,707	66	356	311	126	90	23	51	2,730
New Lay off	96	53	—	5,267	302	164	—	64	5,946
Jobseeker	144	27	1	5,024	196	164	5	11	5,542
Employed	135	47	278	2,197	102	171	19	22	2,971

Note : 1987. 4. 1~1988. 12.31.

[Source] Hokkaido Prefectural Government.

TABLE 3 *Population and Industrial Deliveries in Muroran City*

	1980		1986	
	Industrial Deliveries	Steel Deliveries (%)	Industrial Deliveries	Steel Deliveries (%)
Deliveries (million Yen)	66,137	21,138(31.9)	39,907	11,195(28.1)
Company	239	13	171	12
Employee(person)	14,563	5,999(41.2)	10,949	5,344(48.8)
Population(person)	162,433		143,081	

TABLE 4 *Change of Employee Number in Leading Companies and Subcontract Companies (Muroran City)*

	Leading 7 Companies	Leading 4 Companies' Subcontract Companies
1980	10,595	8,407
1985	8,847	6,027
1986	7,388	5,510
1987	6,916	4,946
1988	6,809	4,239

Note : Leading Company, Steel 2, Ship Building 3, Cement 1, Oil Refinery 1

Subcontract Company, Related to 2 Steel and 2 Ship Building Companies

[Source] Economic Planning Agency.

TABLE 5 *Gross Production in Hokkaido (Unit : ¥ 100 million)*

	Gross Production		Percentage of Total		Comparison with Preceding Year	
	1980	1985	1980	1985	1980	1985
Total	111,216	128,890	—	—	+6.9	+4.5
Primary Industry	8,262	9,045	7.4	7.0	+2.2	-5.7
Secondary Industry	30,251	31,099	27.2	24.1	+8.8	+3.6
Tertiary Industry	75,709	92,758	68.1	72.0	+7.7	+5.4

[Source] Hokkaido Government : Statistical Yearbook of Income in Hokkaido.

TABLE 6 *Questionnaire: Job Creation in Hokkaido*

Industry	Sample Size
Steel	12
Machine	15
Distribution	16
Hotel	17
Software	17
Total	77

Survey Period : 10.10~11.20. 1987.
Rate of Collection : 72.6%.

TABLE 7 *Change of Employee Number in These 3 Years (Regular Employee, Man)*

	Steel	Mach.	Dist.	Hotel	Soft	Total	%
1. Increase	0	6	9	6	14	35	45.4
2. Decrease	10	5	6	8	1	30	39.0
3. No Change	1	2	0	0	0	3	3.9
4. N.A.	1	2	1	3	2	9	11.7
Total	12	15	16	17	17	77	100.0

TABLE 8 *Question : Do you have any surplus workers in your company?*

	Steel	Machine	Distribution	Hotel	Software	Total	%
1. Yes							
a) less than 5%	2	0	1	2	1	6	7.8
b) 6~10%	3	1	1	0	1	5	6.5
c) 11~20%	3	1	0	0	1	5	6.5
d) 21~30%	1	1	0	0	0	2	2.6
e) more than 30%	0	0	0	0	0	0	0
2. No	3	12	13	14	15	57	74.0
3. N.A.	0	0	1	1	0	2	2.6
Total	12	15	16	17	17	77	100.0

TABLE 9

Do you adjust the employment according to high Yen rate and economic fluctuation?

	Steel	Mach.	Dist.	Hotel	Soft	Total	%
1. Yes	10	5	8	4	5	32	41.6
2. No	2	10	8	10	12	42	54.4
3. N.A.	0	0	0	3	0	3	4.0
Total	12	15	16	17	17	77	100.0

TABLE 10 *What kind of method do you have for adjustment of surplus labor force?**(Multiple choice)*

	Steel	Mach.	Dist.	Hotel	Soft	Total	%
1. Regulate over time	7	3	2	1	1	14	8.9
2. Job displacement (inside firm)	9	4	8	7	4	32	20.2
3. Regulate new employment (directly from school)	6	6	5	4	3	24	15.2
4. Increase part-time worker	0	1	8	5	3	17	10.8
5. Decrease new employment (from other company)	2	3	3	2	1	11	7.0
6. Decrease part-time worker	1	0	1	3	0	5	3.1
7. Dismissal	0	0	0	0	0	0	0
8. Lay-off	4	0	0	0	0	4	2.5
9. Job displacement (outside firm)	8	3	1	0	1	13	8.2
10. Use dispatched worker	6	1	0	2	1	10	6.3
11. Others	1	0	0	0	0	1	0.6
12. N.A.	1	5	4	7	10	27	17.1
Total	45	26	32	31	24	158	100.0

TABLE 11

Do you have any ability development program for the job displacement?

	Steel	Mach.	Dist.	Hotel	Soft	Total	%
1. Yes							
a) OJT (inside workshop)	8	4	7	7	6	32	34.4
b) Off-JT (outside workshop)	5	0	3	1	0	9	9.7
c) Training (outside company)	3	0	3	1	2	9	9.7
d) Others	0	0	0	0	0	0	0
2. No	4	11	7	7	10	39	41.9
3. N.A.	0	0	0	3	1	4	4.3
Total	20	15	20	19	19	93	100.0

TABLE 12

Do you have any ability development program for middle-aged and above people?

	Steel	Mach.	Dist.	Hotel	Soft	Total	%
1. Yes							
a) OJT	5	1	2	3	4	15	14.4
b) Off-JT (inside company)	3	0	4	1	0	8	7.7
c) Seminar (outside company)	4	2	5	1	2	14	13.5
d) Correspondence course	5	0	2	2	1	10	9.6
e) Self-development	5	3	3	3	0	14	13.5
2. No	3	10	8	8	12	41	39.4
3. N.A.	0	0	0	0	2	2	1.9
Total	25	16	24	18	21	104	100.0

TABLE 13

What kind of manpower do you want for new business development in future?

	Steel	Mach.	Dist.	Hotel	Soft	Total	%
1. Engineer for R&D	5	7	1	0	11	24	21.8
2. Highly skilled production worker	3	1	0	0	4	8	7.3
3. Manager	1	2	3	3	4	13	11.8
4. Product planning, developing, marketing staff	7	5	11	7	1	31	28.2
5. Salesman	4	2	7	9	5	27	24.6
6. Others	0	0	0	1	3	4	3.6
7. N.A.	0	2	0	1	0	3	2.7
Total	20	19	22	21	28	110	100.0

TABLE 14 *What do you think about lifetime employment system in future?*

	Steel	Mach.	Dist.	Hotel	Soft	Total	%
1. Existing state will continue	0	2	2	3	3	10	13.0
2. Some change but basically continue	10	12	11	9	11	53	68.8
3. Partially continue or mostly vanish	2	1	1	2	1	7	9.1
4. Perfectly vanish sooner or later	0	0	1	2	1	4	5.2
5. N.A.	0	0	1	1	1	3	3.9
Total	12	15	16	17	17	77	100.0

TABLE 15 *Idea-maker's Profile*

		City	Town	Village	Total	
Inside the public government office	Position	Director	2	6	2	10
		Manager	5	30	1	36
		Regular Staff	5	16	1	22
		Sub Total	12	52	4	68
	age	Sixties	1	1	0	2
		Fifties	3	12	1	16
		Forties	6	22	0	28
		Thirties	3	10	1	14
		Twenties	1	3	0	4
	Outside the public government office	Inhabitant	0	4	4	8
Inhabitants' group		1	5	2	8	
Consultant company		3	2	2	7	
Private enterprise		1	3	0	4	
Central government		2	0	0	2	
Prefectural government		1	0	0	1	
	Sub Total	8	14	8	30	
NA		2	14	7	23	

TABLE 16 *Project for Regional Development in Hokkaido*

Category	Project	%
① Resort development	6	6.3
② Sightseeing, recreation, sports equipments & facilities	45	47.4
③ Harbor, beach adjustment	4	4.2
④ Layout a new park	13	13.7
⑤ Activation local industries	8	8.4
⑥ Sea development	3	3.2
⑦ Development of streets	3	3.2
⑧ Invitation of new plant location	2	2.1
⑨ Techno-polis (New industrial city)	3	3.2
⑩ New Media	1	1.0
⑪ New technology development	1	1.0
⑫ New institution for the aged	4	4.2
⑬ Event	2	2.1
Total	95	100.0

TABLE 17 *Project Planner's Profile*

			City	Town	Village	Total
Inside the public government office	Position	Director	1	1	0	2
		Manager	5	30	5	43
		Regular Staff	12	15	3	30
		NA	1	13	5	19
	age	Sixties	1	1	0	2
		Fifties	1	8	2	11
		Forties	10	23	3	36
		Thirties	5	16	2	23
		Twenties	2	3	1	6
		NA	4	17	6	27
Outside the public government office	Inhabitant		0	1	1	2
	Inhabitants' group		1	8	1	10
	Consultant company		4	7	0	11
	Private enterprise		1	3	2	6
	The third sector		1	0	0	1
	Other organization		4	2	0	6