Section 4 Establishing a new economic structure that is open and becomes the core of Asia

The declining birthrate and an aging population constitute the greatest changes faced by Japan in its economic and social structures, which create restrictions on domestic management resources such as labor and capital.

The declining birthrate and an aging population in Japan are the most rapid among other developed countries, and it has already been over a decade since the labor population began decreasing in 1998¹. The total population of the country peaked at 127.74 million in 2006 and subsequently began a long-time decline. It is forecasted to fall to 100.6 million by 2050^2 , thereby resulting in more serious labor shortages in the future (see Figure 2-4-1)³.



3. The use of potential labor results in a reduction of the decrease in the labor population by approximately 3.4 million in 2017 and approximately 6 million in 2030. Sources: Report of Employment Policy Study Group "ROUDOURYOKU JINKOU NO MITOOSHI (the Ministry of Health, Labor and Welfare) provided by Keizai Zentei Senmon Iinkai (Economic Assumption Special Council), Nenkin Bukai (Pension Team), Second Social Security Council.

The escalation of the declining birthrate and an aging population contributes to a decrease in the rate of domestic savings⁴. While the savings rate in Japan was the highest among major developed countries in 1990, it declined sharply to 3.1 % as of 2006, which was below those of the United

¹ As a result, the fear of inadequacy of human resources possessed by companies is the most serious among developed countries, as mentioned in Chapter 2-1-2 (Manpower (2008), "Talent Shortage Survey 2008 Global Results").

² These figures are according to the "medium variant projection" in "Population Projections for Japan (December 2006) issued by the National Institute of Population and Social Security Research.

³ However, the use of potential labor is estimated to result in a reduction of the decrease in labor population by approximately 3.4 million in 2017 and approximately 6 million in 2030 (the Ministry of Health, Labour and Welfare (2007), "Report of Employment Policy Study Group - ROUDOURYOKU JINKOU NO MITOOSHI").

⁴ The Ministry of Economy, Trade and Industry (2005) has verified that the declining birthrate and an aging population can become factors responsible for a certain decrease in the household savings rate.

Kingdom and Germany. Such a fall in the savings rate may restrict the capital expenditure of companies that rely on indirect finance (see Figure 2-4-2).

Under these circumstances, Japan will require the following three policies in order to continue its economic growth⁵.



(a) Optimum allocation of management resources currently present in Japan

First, it is important that management resources such as labor and capital that are currently held in Japan are used as effectively as possible. To this end, it is essential that the movement of labor and capital among industries and regions is facilitated and such resources are relocated to industries with higher productivity⁶.

(b) Using potential management resources in Japan

In addition to the above, discovering potential management resources in Japan is also important. In particular, the labor force participation rate of women in Japan is lower than international standards. Moreover, increasing work opportunities for the elderly who have extensive knowledge and experience should become ever more important, considering the growing elderly population.

(c) Using overseas management resources

In Japan, productivity must be further improved by bringing the strength of Asian regions with a high growth rate into the country simultaneously with the effective use of domestic management resources; in addition, new value must also be created. In order for Japan to actively bring in management resources such as people, materials, money, knowledge, and technology of other Asian regions, its relevant market systems must be well-developed and policies must be reviewed in order to provide "places" and "opportunities" for Asian management resources.

⁵ The policies presented here are those required for an increase in supply capacity, i.e., an increase in potential GDP.

⁶ The contribution of more efficient distribution of management resources to higher productivity can be understood quantitatively by growth accounting inclusive of the effects of resource redistribution. Refer to Chapter 2-1 for details.

Based on the recognition of such issues, the following portion of the paper first considers the necessity of domestic structural adjustment for the effective use of domestic management resources, including potential ones. Subsequently, it examines, in each section, the directions of the market systems in Japan and policy review for the purpose of bringing in management resources from outside the county, particularly other parts of Asia.

1. Necessity of structural adjustment in Japan for the effective use of domestic management resources

(1) Overview of the industrial and employment structure of Japan

(Changes in Japan's industrial structure: from heavy and chemical industries to a service economy)

During the high-growth period of the past, the then government positioned "heavy and chemical industrialization" as the core of its industrial policy and concentrated the resources of the country on the development of its manufacturing industry. Initially, businesses such as steel and chemical manufacturing, and subsequently automobiles, home appliances, and other manufacturing products were selected as the targets of the industrial policy. This was due to two reasons—the high standards of productivity growth rate and the high income elasticity of demand for these businesses⁷. In other words, the manufacturing industry during that time included businesses such as home appliances and automobiles whose productivity growth rates were markedly high due to rapid capital accumulation, and income elasticity of domestic demand was also rather high due to the rapid spread of consumer durables⁸, which were highly competitive in the export to overseas markets as well.

However, with the rise in the income levels of people, the domestic household demand shifted from that for consumer durables to services. As a result, although the productivity growth rate of the manufacturing industry remains high, at least domestically, its income elasticity of demand is already below that of the service industry (see Figure 2-4-3).

⁷ In the 1960s, "the 60s' Vision," which was the core of the industrial policy during the high-growth period, endorsed the support for automobile, petrochemical, machinery, electronics, and other product manufacturing industries as those that meet both the criteria of "productivity growth rates" and "income elasticity" based on two directions—the orientation toward sectors with a substantial rise in demand associated with increased national income, and the orientation toward sectors with high potential productivity growth that were expected to create international comparative advantage; moreover, "heavy and chemical industrialization of the industrial structure" were encouraged.

⁸ Well-known examples include the so-called "Three Sacred Treasures (a metaphor for the three electric appliances—televisions, washing machines and refrigerators—perceived as status symbols)" and the 3Cs (cars, coolers, and color TVs).





The shift from the manufacturing to service industry ("shift to a service economy") has also become more apparent in the employment structure in addition to the increased share of the service industry in GDP composition. The number of workers by industry since 1970 indicates an increase in the number of employees in service businesses. The share of the agriculture, forestry, and fishery industries decreased substantially between 1970 and 2006, and that of the manufacturing industry has also been gradually declining to below 20% since 2000 (see Figures 2-4-4 and 2-4-5).



Notes: 1. 1970 and 1975 are based on 1990, 1980 to 1995 are based on 1995, and 2000 to 2006 are based on 2000. 2. "Other" includes "government service producers" and "private nonprofit producers of household services." Source: Cabinet Office, "National Accounts".



Figure 2-4-5 Changes in the percentage of the number of workers by industry

Notes: 1. 1970 and 1975 are based on 1990, 1980 through 1995 are based on 1995 and 2000 through 2006 are based on 2000. 2. "Other" includes "government service producers" and "private nonprofit producers of household services." Source: Cabinet Office, "National Accounts".

(The current state and issues regarding the industrial structure of Japan) Low productivity of the service industry hindering growth⁹

As noted previously, the economy has been steadily becoming increasingly service-oriented. Nonetheless, the productivity of Japan's service industry generally remains low¹⁰, and, in particular, the labor productivity of industries in which a number of workers are concentrated¹¹ is lower than that of other industries. Amid the global expansion of service consumption promoted by increased incomes, the advancement of the service industry is necessary in Japan (see Figure 2-4-6).

A comparison of the difference between the labor productivity of three industries with the largest number of workers in the service sector and that of the manufacturing industry among five major developed countries as a means of checking whether the characteristics of Japan's industrial structure are comparable to the general international standard reveals that Japan has the lowest ratio of the two productivity figures (see Table 2-4-7). This indicates that the dual structure comprising the manufacturing industry with high productivity and the service industry with low productivity is exceptionally evident in Japan. The transformation of the economy into a more service-oriented one while maintaining this structure would result in the shift of employment opportunities from the industry with high productivity to the one with low productivity and, as a consequence, macroeconomic growth would be hampered. Therefore, improving the productivity of the service industry becomes important.

⁹ The EU-KLEMS database and OECD statistics are used for the productivity analysis in this section. While these data are useful for the international comparison of productivity, caution must be exercised with regard to various issues, which include the evaluation of service quality, input measurement, and treatment of business cycle factors.

¹⁰ A study has indicated that, in Japan, growth in the productivity of industries with a large worker share is sluggish (Harada (2007), "YOUROPPA NO SEISANSEI WA NAZE NIPPON YORI TAKAINOKA").

¹¹ Such industries include "construction," "wholesale and retail," "restaurants and hotels," "medical and welfare services," and "other services."



Table 2-4-7 Difference in labor productivity between service businesses with a large number of workers and manufacturing businesses in major developed countries

	Industry	Share of Workers (%)	Labor Productivity (million/person)	Difference in labor productivity b/w service and manufacturing industries (labor productivity of service industry / labor productivity of manufacturing industry)
	Manufacturing	17.4%	10.45	
	Service industry total (3 types of businesses below)	60.0%	6.44	(61.6%)
Japan	Other services	37.2%		
	Wholesale, retail and	17.0%		
	Transportation, storage and communication	5.8%		
	Manufacturing	12.2%	10.45	
US	Service industry total (3 types of businesses below)	38.6%	6.44	91.9%
0.5.	Wholesale, retail	14.7%		
	Real estate	12.1%		
	Medical & welfare	11.8%		
	Manufacturing	12.2%	39.85	7 < 00/
U.K.	Service industry total (3 types of businesses below)	44.9%	30.29	/6.0%
0.11	Wholesale, retail and	17.3%		
	Real estate	15.5%		
	Medical & welfare	12.0%		
	Manufacturing	19.6%	57.93	02.00/
Germany	Service industry total (3 types of businesses below)	38.5%	54.34	93.8%
	Wholesale, retail and	15.3%		
	Real estate	13.0%		
	Medical & welfare	10.2%	(2.4)	
		13.8%	62.64	07.4%
France	of businesses below)	39.6%	61.01	97.4%
	Wholesale, retail and	14.6%		
	Real estate	13.6%		
	Medical & welfare	11.4%		

Notes: 1. For the service industry, three types of businesses with the largest number of workers in each

- country's service industry have been used.
- 2. "Other services" in the number of workers in Japan include "restaurants and hotels" and "education."
- 3. The number of workers in Japan and the U.K. is calculated based on the number of jobs, not the number of people.
- 4. The amounts of added value in the source material are indicated in the currency of each country (yen for Japan, US dollar for the U.S., pound for the U.K. and euro for Germany and France), and the units of labor productivity follow these currencies.

Source: OECD, National Accounts of OECD Countries, volume2.

Japan's service industry that has not been able to eliminate the "Baumol's cost disease"¹²

In the industrial structure theory, there is a hypothesis known as "Baumol's cost disease."¹³ The hypothesis is based on the concept that in an economy in which sectors with a high productivity growth rate (typically the manufacturing industry) and those with a low one (service industry) coexist, the weight of the service industry with a relatively low productivity growth rate gradually increases with the rise in the income level; therefore, unless the income elasticity of products of the manufacturing industry is extremely high, the relative price (cost) of services with a low productivity growth rate and the labor share of the service sector will continue to increase, thereby resulting in a decrease in the growth rate of the entire economy. The demand for labor in the sectors with high productivity decreases due to capital intensification or other causes, and the resultant excess labor flows into sectors with low productivity, which, then, slows down the growth of the service industry in a majority of major developed countries¹⁴.

Meanwhile, in the United States, the productivity growth rate of its service industry has been increasing since the mid-1990s when information technology developed rapidly; and that, the view that Baumol's cost disease has been cured comes to be widely accepted¹⁵.

On the other hand, in Japan the improvement in the labor productivity of its service industry, particularly of personal service businesses in which employment is concentrated, has been sluggish. In fact, the labor productivity growth rates of manufacturing, retail, transportation, restaurant and hotel, and other service industries (annual averages from 1995–2005) of Japan, the United States, and the United Kingdom indicate that—in the United States and United Kingdom—these service businesses that were considered labor-intensive and as those that could not easily improve their productivity achieved certain improvement; whereas, in Japan the growth rate has not even reached 1% and the disparity from the productivity growth rate of the manufacturing industry remains substantial (see Figure 2-4-8)¹⁶.

¹² The Japan Productivity Center for Socio-Economic Development (2007) was used as a reference for the description in this section.

¹³ A phenomenon discovered by William J. Baumol and William G. Bowen in the 1960s, which primarily refers to an increase in the salaries for jobs with stagnant productivity brought about by the salaries of other jobs that have achieved higher productivity.

¹⁴ Calculations based on the EU KLEMS Database indicate that the differences in the rates of labor productivity growth between the manufacturing and service industries (annual averages between 2000 and 2004) are 3.66% for Japan, 0.45% for the United States, and 1.54% for Germany.

¹⁵ For example, Bosworth and Triplett (2007) indicate that the spread of service businesses in the entire economy and changes in the service industry structure have not negatively affected macro labor productivity. In addition, the Ministry of Economy, Trade and Industry (2007a) has conducted a detailed analysis of the factors contributing to the increase in labor productivity by industry in major developed countries. The results reveal that in the US service businesses such as communication, wholesale, retail, financial intermediation, and transportation have achieved high rates of labor productivity growth that are comparable to those of the manufacturing industry due to a significant increase in total factor productivity.

 $^{^{16}}$ The low productivity growth rate of such service businesses (employing a large number of workers) results in an internationally low level (41%) of the contribution of the service industry to the labor productivity growth rate in Japan (as opposed to 56% in the United States and 57% in the United Kingdom).

As this indicates, there has not been any indication that the disparity in the productivity of Japan's manufacturing and service industries will be reduced, and Baumol's disease appears to persist¹⁷.



Figure 2-4-8 Labor productivity growth rate by industry in Japan, the U.S. and the U.K.

Signs of losing flexibility in the industrial structure and the vicious circle structure that preserves low productivity

In addition to the above mentioned issue that the low productivity of the service industry constitutes a bottleneck in Japan's industrial structure, there are a number of problems when you see the industrial structure from a dynamic perspective, i.e., the movement of management resources (labor and capital) from one industry to another. More specifically, the problems are broadly divided into two—management resources do not move from a low-productivity industry to a high-productivity one and low-productivity industries commonly use irregular employment in order to reduce the cost of labor, thereby causing low-productivity to persist.

(a) Loss of flexibility in the movement of management resources among industries

The following section examines the problem of inter-industrial resource distribution in Japan on the basis of the analytical results of growth accounting taking into consideration the effect of inter-industrial distribution of labor, capital, and other resources. The results demonstrate that while the contribution of the effect of inter-industrial resource distribution has been consistently positive, it has been declining in recent years; moreover, it is probable that the inter-industrial distribution of capital is gradually becoming more inefficient¹⁸. Meanwhile, the contribution of the effect of inter-industrial distribution of labor was negative between 2000 and 2005, thereby suggesting that the

Source: EUKLEMS Database, 2008

¹⁷ Nonetheless, certain businesses in the recent service industry have seen some improvement in their productivity. According to "OECD Compendium of Productivity Indicators 2008" published in April this year, the labor productivity growth rate (annual average between 2000 and 2005) of Japan's "market service industry (i.e., the service industry exclusive of non-market service businesses such as education and medical services)" was 2.8%, which was the highest among seven major developed countries. Although the interpretation of this result requires attention because only Japan does not include the "restaurant and hotel" industry that tends to lower productivity, the figure is regarded as one that indicates prospects for improvement in the productivity of the service industry of a country that has struggled in the past.

¹⁸ In industries with a high rate of productivity growth, capital accumulation such as capital expenditure may have not been made correspondingly; on the other hand, capital accumulation may have been increasing in industries with a lower productivity growth rate.

inter-industrial distribution of labor resources has been worsening in recent years¹⁹. The decrease in the inter-industrial distribution of such resources indicates the need to consider the development of a conducive environment for improving the efficiency of the labor, financial, and capital markets (see Table 2-4-9).

			(Annual average growth			
		1975-1980	1980-1990	1990-2000	2000-2005	
TFP growth rate	(On the assumption that the compensation paid to factors of production are equal among industries)	2.50%	1.94%	0.70%	1.01%	
	Domar-weighted TFP growth rates	2.08%	1.70%	0.32%	0.88%	
1-	Resource distribution effects of capital among industries	0.48%	0.27%	0.16%	0.15%	
<u> </u>	Resource distribution effects of labor among industries	-0.07%	-0.03%	0.21%	0.02%	

Table 2-4-9 Growth accounting for Japan incorporating the resource distribution effect

Source: Fukao K., and T. Miyakawa, "Is Japan's TFP Growth Reviving? New Estimates Based on the JIP Database".

(b) Vicious circle of productivity stagnation in low-productivity industries

A breakdown of the contribution of labor share to changes in labor productivity and wages performed in order to examine the effects of productivity on wages reveals that, in the manufacturing industry, the growth rate of wages rather than that of labor productivity was reduced; as a result, the labor share has declined. On the other hand, in non-manufacturing industries, including the service industry, "wages have been reduced to a greater extent than the reduction in productivity," thereby resulting in a decline in labor share. While labor share has been decreasing both in the manufacturing and non-manufacturing industries in recent years, entirely different mechanisms are responsible for such a decrease. In addition, a similar analysis of non-manufacturing industries that have been subdivided into categories within the industries indicates that labor share declined after a wage reduction to a degree greater than the decrease in productivity of small- and medium-sized companies in low-labor productivity businesses such as transportation, wholesale, retail, and lodging²⁰ (see Figure 2-4-10).





Source: Ministry of Finance, Financial Statements Statistics of Corporations by Industry, Quarterly.

¹⁹ Employment may not have been increasing in response to high rates of productivity growth while, in contrast, employment may have been increasing in industries with a lower productivity growth rate.

²⁰ Moreover, as stated earlier, these are the three industries with the largest number of workers.

Such decrease in the wages of non-manufacturing industries may have been caused by a reduction in either the number of employees or salary per employee. A breakdown of the rates of changes in the total employee salaries into "changes in the number of employees" and "changes in salary per employee" illustrates the tendency of small- and medium-sized non-manufacturing companies to reduce the salary per employee and increase the number of employees. In other words, these businesses are coping with lower productivity by reducing employee salaries (see Figure 2-4-11).



Figure 2-4-11 Breakdown of the factors responsible for year-on-year changes in employee salaries

Such a reduction in salary per employee in small- and medium-sized non-manufacturing businesses is believed to be achieved by an increase in non-regular employees. Non-manufacturing industries indeed employ a considerable number of non-regular workers²¹. These wage levels generally remain lower than those of regular employees; in addition, no human investment is made, thereby resulting in productivity stagnation, which will be detailed subsequently (see Figure 2-4-12).

²¹ The ratios of irregular employees in major industries (2007) include 44.9% for "wholesale and retail," 66.0% for "restaurants and hotels," and 49.2% for "services," all of which exceed 33.4% of the "non-agriculture and forestry" industry (the Ministry of Internal Affairs and Communications "Labor Force Survey (Preliminary Report) Average Results of 2007."



Figure 2-4-12 Relationship between increase in wages by industry and part-time employment Increase in wages per (2002-2006)

Source: Yashiro, N, Japanese Economy; Challenge towards Sustainable Growth.

(2) Background of the low-productivity of the service industry: the perspective of population concentration

(Measures to improve the productivity of the service industry)

In order to improve the productivity of the service industry and eliminate Baumol's cost disease, further IT capital accumulation, development of a market environment that promotes rejuvenation, and development of a market environment that encourages healthy price and quality competition are noted to be important²².

On the other hand, a recent study²³ indicated that the improvement in the productivity of "personal services" characterized the most by "simultaneity of production and consumption"²⁴ requires an increase in the population density of those who demand the services ("demand density"). This study states that, in the personal service industry, "economies of scale of business establishment," "economies of company scale,"²⁵ and "economies of scope"²⁶ exist in almost all service businesses; economies of demand density²⁷ are clearly observed in all service businesses; and doubling the

²² The Ministry of Economy, Trade and Industry (2007c), *White Paper on International Economy and Trade 2007.*"

²³ Morikawa, M. (2008), "Economies of Density and Productivity in Service Industries: An Analysis of Personal-Service Industries Based on Establishment-Level Data."

²⁴ In the service industry, the producer and consumer must directly interact with each other during the process of delivering the service, which, unlike in the manufacturing industry, imposes a restriction that the service cannot be stocked and other technical limitations on the production of services.
²⁵ This refers to a state in which a well-performing service company establishes new outlets in numerous

²⁵ This refers to a state in which a well-performing service company establishes new outlets in numerous different regions while creating a chain of stores, thereby possibly contributing to an improvement in productivity (Morikawa, 2008).

²⁶ This refers to providing services in combination with other businesses rather than providing only a specific service from which synergy effects such as attracting customers and facilitating the efficient use of equipment can be expected (Morikawa, 2008).

²⁷ This refers to a state in which the higher the population density of the place in which the establishment is located, the higher the productivity, assuming that conditions such as the business scale and level of

population density of cities, towns, and villages causes a 10–20% increase in productivity. The diagram below illustrates that the productivity improvement brought about by an increase in population density is exceptionally large in the service industry that includes service and retail businesses, thereby implying the importance of population concentration in the performance of the service industry. A breakdown of the factors causing differences in labor productivity limited to personal services—in which the effect of population density is expected to be the highest—indicates that the contribution of disparities among cities, towns, and villages is considerable despite the rather insignificant differences among prefectures. This result suggests a possible influence of urban policies, such as the creation of Compact City, on productivity improvement in the service industry (see Figures 2-4-13 and 2-4-14).



Notes: 1. The degree of increase in productivity when the population density doubles was measured.

2. The figures of the service industry represent the simple averages of movie theaters, golf links, tennis courts, bowling centers, fitness clubs, driving ranges, cultural centers, wedding halls, and beauty salons. The number of hours worked has not been taken into sideration. Source: Morikawa, M. (2008), *Economies of Density and Productivity in Service Industrie*.

diversification are constant. Morikawa (2008) concludes that, in contrast to the service industry, the "trading area" of the manufacturing industry is generally nationwide or even worldwide; consequently, the profit from productivity as a result of demand at the location of the establishment is likely to be insignificant.



Figure 2-4-14 Breakdown of factors responsible for differences in labor productivity of business establishments providing personal services (differences within/between regions)

Source: Economies of Density and Productivity in Service Industries (Morikawa 2008)

(The low level of the urban population ratio of Japan among developed countries)

The economies of the density of people who demand personal services is necessary for improving the productivity of personal services. In other words, productivity improvement in the service industry requires a concentration of people who demand the services, i.e., those who receive the services.

Statistics provided by the United Nations indicate that the concentration of urban population in Japan is at 66.0%, which is low as compared with that in other major developed countries²⁸. Although the population of Tokyo²⁹ is exceptionally large in Japan, the small populations of urban areas other than Tokyo bring down the urban population ratio (urbanization rate) of the country³⁰. Therefore, this implies that the low productivity of Japan's service industry is attributable, as one factor, to the problem of population concentration in the country's urban areas in addition to the low use of IT, lack of revitalization, and inadequate environment for competition, as noted earlier (see Figure 2-4-15).

²⁸ The figures for the countries are sourced from the data pertaining to the year 2005. For Asian countries, these figures are 40.4% for China, 61.6% for South Korea, and 28.7% for India. The concentration of population in large cities around the world (2007) indicates a global average of 49.4%, developed country average of 74.4%, and developing country average of 43.8%. United Nations (2007), World Urbanization Prospects: The 2007 Revision.

Follows the definition provided by the United Nations, rather than the so-called Tokyo.

³⁰ Cities in Japan with a population of 750 thousand or over, based on United Nations statistics, include Osaka and Kobe (11.258 million), Nagoya (3.199 million), Fukuoka and Kitakyushu (2.771 million), and Sapporo (2.534 million), thereby suggesting that small populations are concentrated in urban areas.



Source: World Bank, WDI; United Nations, World Urbanization Prospects, The 2007 Revision.

(Japan's employment structure from the perspective of population movement among regions)

Based on the concept that population concentration presents an indirect cause for the low productivity in Japan's service industry, the following section considers population movement among three major urban areas in Japan. The Japanese economy, which achieved a dramatic growth in the post-World War II era, can be divided into the period of rapid industrialization until 1970 and that of subsequent development of the service economy. The conversion of the industrial structure of the country coincided with changes in the regional economic structure, whose effects are believed to be evident in inter-regional population movement (see Figure 2-4-16). This section discusses the population flows into the three major urban areas of Tokyo, Osaka, and Nagoya and the productivity of each region at two points in time, namely, the years 1970 and 2005.



The employment structure until the 1970s focusing on the manufacturing industry

Japan concentrated its efforts on the development of infrastructure for the existing coastal industrial zones from the period of restoration after World War II until the first half of the high-growth period. As a result, population flows from rural regions to urban areas increased, income disparities among difference regions continued to grow, and the problem of overpopulation in industrialized areas began to draw attention.

In response, during the 1960s, the country's development plan determined "development that would maintain inter-regional balance³¹" as its basic principle. Infrastructure development in regions other than the four major industrial zones began to be more focused for the purpose of industrial decentralization, aiming to eliminate inter-regional disparities and solve the problem of overpopulation of urban areas.

The GDP shares of the three major urban areas indicate a constant increase in the shares of secondary industries until 1970; however, subsequently in the 1970s, the shares of tertiary industries soared and those of secondary industries declined. The shares of primary industries fell sharply during this period, which determined the subsequent trend (see Figure 2-4-17).

As indicated in the Population Census of 1970, population movement during this time reveals a net inflow of population in all three major urban areas and a large number of people, particularly production line workers, moving into all the urban areas. Following this, the population flows into urban areas slowed down in the mid-1970s, after the oil crisis (see Figure 2-4-18)³².

³¹ Cited from the Comprehensive National Development Plan adopted by the Cabinet in 1969.

³² This appears to be a result of the attainment of a certain level of population concentration in the three large industrialized cities. Subsequently, increased land prices and wages in the three urban areas caused industries such as steel and petrochemicals that were land-intensive and used imported raw materials as well as assembly and other industries that were intensively using unskilled labor to move out to the surrounding areas, which may have been another cause.



Notes: 1. See Appended Note 2-4 for the classification of urban areas.

2. Figures are based on 68SNA for the period between 1955 and 1979 (the 1980 standard developed by the Cabinet Office) and the period between1975 and 1989 (the 1990 standard developed by the prefectures), and based on 93SNA for the period between 1990 and 1995 (the 1995 standard developed by the prefectures) and the period between 1996 and 2005 (the 2000 standard developed by the prefectures).

Source: Cabinet Office, "Prefectural Accounts".





Notes: 1. Population in the age group 15 years and over is used. Since the published results of the population movement by type of job for 1970 include the movement for one year, the estimated classification was performed using the results of the population movement of all workers for five years.
2. See Appended Note 2-4 for the regional division.

Source: Data from the Population Census (1970) (Ministry of Internal Affairs and Communications) were used for the calculations.

Shift to a service economy and productivity of the service industry in each urban area

Since the population and advanced urban functions were concentrated solely in Tokyo in the 1980s, regional policies until around 1990 focused primarily on the decentralization of various functions from large cities and regional promotion through rural development. Furthermore, greater efforts have been made for the spontaneous development of regional economies in recent years. For example, the

industrial cluster plan through which researchers from small- and medium-sized companies, universities, and other organizations gathered in each region actively communicate with one another in order to develop an environment in which innovation is achieved based on the formation of human networks has been promoted since 2001.

The population movement around this time, as indicated in the 2000 census, is characterized by no population flow into the Osaka and Nagoya areas as opposed to the Tokyo area, where the inflow of a large number of people continued, particularly workers in service-related businesses (see Figure 2-4-19). The development of such a condition of sole concentration of people in Tokyo may be the result of a change from the conventional agglomeration led by the manufacturing industry to that led by the service industry in the formation of agglomerations in the large city, Tokyo.





Note: Population in the age group 15 years and over is used. See Appended Note 2-4 for the regional division. Source: Data from the Population Census (2000) (Ministry of Internal Affairs and Communications) were used for the calculations.

Conventional large cities have been formed around agglomeration economies based on contact among producers and between producers and consumers. However, the main arenas of actual production activities have been relocated to local cities in Japan and other parts of Asia due to liberalization of trade and investment as well as advancement of traffic and communication technology. Therefore, the economic activities in large cities mainly involve planning, control, research and development, and other knowledge creation activities. Establishments for such knowledge creation are not required in numerous parts of Japan, and this is believed to be the reason for the concentration of the regional economic structure in Tokyo. The flow of service industry workers into Tokyo supports this concept.

The productivities of the service industry in the three large cities indicate that only the figures

pertaining to Tokyo area remain high (see Figure 2-4-20). The productivity of the Tokyo area proved to be higher than those of the Osaka and Nagoya areas in "wholesale and retail," "financial business and insurance," and "services." The high productivity of the service industry in the Tokyo area reflects population flow into this area.



Source: Data from the Prefectural Accounts (Cabinet Office) and Population Census (2000) (Ministry of Internal Affairs and Communications) were used for the calculations.

(3) Positive policies of industrial structure adjustment in other countries and implications for Japan

Although economic globalization associated with the liberalization of international trade and investment brings about benefits such as productivity improvement and job creation in sectors with competitiveness, it also causes business downsizing and job losses in sectors with less competitive power. In order to enjoy the benefits of globalization and make good use of human and other resources, a policy of industrial structure adjustment may be required as part of the efforts to appropriately support workers and companies that have suffered damage, and to facilitate adaptation to the new industrial structure³³. In fact, measures for industrial structure adjustment have already been adopted in other countries in order to enhance their industrial structures with the globalization of their economies.

(The concept of "positive adjustment policy")

In the 1970s, the economies of developed countries required a fundamental reform in their structures in order to cope with economic struggles, particularly after the first oil crisis. However, in reality, structural reform even during the subsequent recovery process was inadequate, and instead, actions such as protective measures against external influences and retention of inefficient sectors were adopted more often. Then, in 1978, the OECD presented the concept of "Positive Adjustment

³³ In Japan, as well, the measures for industrial structure adjustment began to be actively implemented from the 1970s onward (see Column "History of Japan's policies on industrial structure adjustment").

Policies ('PAP')."³⁴ PAP is the concept of actively promoting variation in resource distribution while maximizing the use of market mechanisms in order to deal with changes in the domestic demand structure, technology, relative prices, comparative advantage, and other factors³⁵. Examples of individual policies include industrial, employment, agricultural, and regional policies (see Table 2-4-21).

The PAP concept is based on the recognition that adopting protectionist measures for industries that are losing their competitiveness implies that inefficient companies will be preserved in the medium- to long-term, which, as a result, reduces productivity and promotes inflation, and may encourage other countries to also adopt protectionist measures. Based on the concept of such positive industrial adjustment, the United States, the EU, and South Korea are implementing industrial adjustment policies associated with trade liberalization.

Industrial policies	Bailout and protective measures for individual companies are, as a rule, limited to cases in which the adjustment costs would be extremely high in the short run, and the bailout measures in such cases must clarify the time limitation and costs.
Employment and labor policies	Prevent the retention of employment from becoming a protection for inefficient sectors. Emphasize the improvement of labor liquidity through job training and other efforts. Moreover, improvement in the flexibility of the labor market by facilitating job changes, improving wage structures, etc. and means to prevent unemployment insurance from reducing work motivation are necessary.
Agricultural policies	Market functions must be improved in order to achieve goals with a minimum burden on consumers while ensuring reasonable profit received by producers and safety of food products.
Regional policies	Development of new industries that can grow in the future must be developed in economically weak regions in order to promote the advancement of the entire region through development of infrastructure.

Table 2-4-21 The concept of PAP in the OECD

Source: Economic Planning Agency (1980), Annual Economic Report 1980.

(Overview of the TAA program of the United States)

The Trade Adjustment Assistance (TAA) program³⁶ of the United States has been established for the purpose of assisting the workers and companies that have suffered losses from increased imports from other countries and for facilitating adaptation to a new industrial structure. The program broadly comprises three parts: (a) assistance for laborers; (b) assistance for companies and industries; and (c) assistance for farmers (see Table 2-4-22).

In 2007, a bill of amendments to the TAA program was introduced in the 110th Congress³⁷. The

³⁴ The 17th Council of Ministers held in June 1978 adopted the "general policy on measures to accelerate the structural adjustment required for maintaining higher economic growth."

³⁵ This was to be achieved by improving market mechanism by encouraging competition, improving the liquidity of labor and capital, and other measures while limiting the policy to temporary and constructive support wherever possible (Economic Planning Agency (1980) "Annual Economic Report 1980").
³⁶ The TAA has expired as the new bill was rejected after being extended for three months (until December

³⁶ The TAA has expired as the new bill was rejected after being extended for three months (until December 31, 2007) from the initial expiration date (September 30, 2007). However, the current program is guaranteed to continue since the 2008 budget bill was passed (the agriculture program expired at the end of December since no budget was allocated).

³⁷ Although the bill (HR3920) submitted by Charles Rangel, the Chairman of the House Committee on Ways and Means, was passed by the House of Representatives on October 31, deliberations on the bill (S1848) submitted by Max Baucus, the Chairman of the Committee on Finance, were stagnant and the bill

bill features the extension of the scope of the TAA program to the service industry, taking into account the off-shoring (overseas expansion) that has been increasing in the service industry, enhanced vocational training programs, and increased budget.

Assistance provided to	Workers	Companies & industries	Farmers
Jurisdiction	Department of Labor	Department of Commerce	Department of Agriculture Foreign Agricultural Service
Supporting law	Trade Act of 1974	Trade Act of 1974	Trade Adjustment Assistance Reform Act of 2002
Conditions for approval	Workers who satisfy the following three conditions: 1. A considerable number of workers in the company or department in the company have been or are likely to be laid off, 2. the sales and/or production of the company or department has definitely declined, and 3. increased import of products of the same type or direct competition is significantly contributing to both layoffs and reduced sales and production. * Trade Adjustment Assistance Reform Act of 2002 has added those workers of companies that have closed down and secondary industries adversely affected (suppliers and contractors of companies that have suffered direct damage) due to a shift of production to the countries covered by the FTAs and preferential tariffs to the beneficiary of the TAA program.	Companies or industries that satisfy the following three conditions: 1. A considerable number of workers have been or are likely to be laid off, 2. the sales and/or production of the company has definitely declined, and 3. increased import of products of the same type or direct competition is significantly affecting both layoffs and reduced sales and production.	Agricultural and fishery workers who have suffered a price reduction of 20%, d'A group of more than three producers or producer association files an application. An application for the adjustment assistance will be filed within 90 days from the approval of the Department of Agriculture.
Assistance measures	 Benefits as income compensation (Trade Readjustment Program) Job training Allowances to cover the expenses for job hunting and residential relocation 	 Technical assistance in production management, quality assurance, business management, export development, marketing, financial management, information technology, etc. is available from the consultants selected upon agreement between the companies to receive assistance and the local Trade Adjustment Assistance Center (TAAC: 12 locations in the U.S.). TAAC pays 50% of the consulting fees and the assistance recipient pays the rest. The maximum budget per company is 150,000 US dollars. At the industry level, 10,000,000 US dollars per industry. 	 Cash benefits for the cultivation of alternative products and technical assistance for sales technology The amount of cash benefits do not exceed 10,000 US dollars per year, which is calculated based on the latest and previous average prices.

Table 2-4-22 Overview of Trade Adjustment Assistance (TAA) program in the U.S.

Sources: The USTR Website and Ministry of Economy, Trade and Industry

(Overview of the EGF program of the EU)

On March 1, 2006, the European Commission announced the establishment of the "European Globalization Adjustment Fund (EGF)" for assisting the employment of workers who lost their jobs due to changes in trade caused by globalization. The EGF is to be implemented between January 1, 2007 and December 31, 2013, providing aid amounting to approximately 500 million euros per annum³⁸.

was not passed. The administration criticized the House bill for problems such as revenue sources and indicates that it may veto.

³⁸ In the report, "the Value of Europe in the Globalizing World" published on October 20, 2005, the European Commission emphasized the benefits of opening their markets and improving competitiveness while also stressing the need to provide early employment support to workers who lose their jobs as a result of globalization. In response, José Manuel Barroso, the President of the European Commission, proposed the establishment of EGF on October 27, 2005. The European Council and European Parliament deliberated on EGF in 2006, and it was adopted on December 20, 2006. By December 2007, a total of four companies—two French automobile suppliers, a German PC and electric product manufacturer, and a

The progress of trade liberalization brings overall benefits such as economic growth and job creation; on the other hand, employees in sectors with less competitive power may lose their jobs. All the EU member countries are affected by these changes; thus, they require funds such as the EGF for which all members are eligible.

The EGF program provides one-time-only and time-limited aid to those workers who have lost their jobs due to temporary dismissal as a result of international trade (see Table 2-4-23).

Assistance provided to	Workers				
Period	Up to 18 months				
Conditions for approval	1. More than 1,000 employees have been temporarily laid off within four months.				
Application procedures	EGF is designed to supplement the assistance from employers and authorities taking active employment measures. 1. When large-scale layoffs caused by globalization are recognized, the member country develops a plan to support the affected workers through employment security offices. 2. The member country requests the EU the funding for EGF. 3. The European Commission examines the proposal submitted by the member country and submits it to the European Council and the European Parliament. 4. If the proposal is approved by the European Council and the European Parliament, the member country becomes entitled to up to 50% of the funds required for the plan. EGF is able to provide the maximum of 500 million euros per year in total.				
Assistance measures	 Employment assistance, job training, reeducation (certification of information technology and skills acquired), job placement/referral, etc. Special, limited-time measures (job seeker allowance, relocation allowance and allowances for lifelong education and training activities measures to facilitate physically-challenged workers and elderly workers to stay in or return to the labor market. 				

Table 2-4-23 Overview of European Globalization Adjustment Fund (EGF) in the E.U.

Sources: European Commission Website and Ministry of Economy, Trade and Industry

(Overview of the FTA complementary measures of South Korea)

Upon the conclusion of the Free Trade Agreement (FTA) between the United States and South Korea, the South Korean government announced its trade security measures for those who incur losses. Specifically, based on the "Act on Trade Adjustment Assistance for Manufacturing, etc," the government is to assist companies and workers who suffer damage from the enforcement of the FTA. In addition, the inclusion of the service industry as a beneficiary has already been announced (see Table 2-4-24).

The agricultural sector, which is assumed to be affected the most, is eligible for funds financed as per the "Special Law on the Assistance for Agricultural and Fishery Workers Associated with the Conclusion of the Free Trade Agreement." Furthermore, in 2007, the government announced aid amounting to 20.4 trillion wons (approximately 2.5 trillion yen) over a period of ten years commencing from 2008, which will be granted in order to compensate for the damage caused by the FTA and enhance the competitiveness of the agricultural sector in South Korea. This package focuses, largely, on projects for improving agricultural conditions (stabilizing the income of full-time farmers and expanding their scale of businesses) and concentrates the assistance on new growth businesses³⁹.

Finnish mobile phone parts company-had been funded by EGF.

³⁹ Such assistance is expected to have effects after the United States-South Korea FTA comes into effect.

[Column 15] History of Japan's policies on industrial structure adjustment

During the period from the post-war recovery to high economic growth, Japan set forth aggressive industrial policies that aimed to "enhance its international competitiveness" (see Column Table 15-1).

	Major principle	Goals of trade and industry policies	Direction of policies
1960s	Heavy and chemical industrialization	 Response to international economic systems Sophistication of industrial structure 	 Stable supply of basic materials Improvement in international competitiveness Prevention of conflicts in the adoption of foreign currencies Elimination of dual structure (measures for small-and medium-sized companies) Expansion of export throug
1970s	Knowledge intensification	 Ensure humanity Active involvement in international peace and development Maintain the power of creativity of the people 	 From heavy and chemical industries to knowledge- intensive industries Balance with social demand for environmental and public safety protection Need for international cooperation Making industrial technology safe and non-polluting Industrial tech
1980s	Intensification of creative knowledge	 Contribution to the international community as a major economic power Overcoming restrictions as a resource-poor country Maintaining both vitality and relaxation 	 Focus on economic security Energy security and reduction of oil dependency Technology-based national development Improvement in the quality of life Interdependence of local communities and industries
1990s	Creation of human values in the global age	 Contribution to the international community and promotion of self reform Achievement of a comfortable and high-quality life Maintain infrastructure for long-term economic development 	 Establishing a new order of international economy International balance between domestic systems and practices Measures to protect the global environment Focus on consumer interests Reduction of concentration in Tokyo through the promotion of regional economies

Column Table 15-1 Visions of industrial policies in the past

Source: Ministry of Economy, Trade and Industry

While adopting industrial policies for promoting high growth, as is evident from the "visions" announced in the 1960s, 70s, and 80s, certain industries that have lost competitiveness inevitably diminish. Since the decline of an industry significantly affects the local economy in which it is located, the "industrial structure adjustment policy" that acts as a measure for cushioning the impact of the falling industry becomes rather important⁴⁰.

From the mid-1970s onward, industrial policies shifted from assistance for high-growth industries to economic structural reforms and emphasized the measures for industrial structure adjustment. This section addresses Japan's industrial adjustment policies by dividing them into two stages.

⁴⁰ Matsumoto, G. (2001), "The Service-led Economy and Industrial Policy."

From the mid-1970s to the mid-1990s

After the phase of adjustment measures for individual industries—such as the coal industry for which an adjustment policy was necessitated by the rapid shift from coal to oil in the 1960s—in 1978, the "Law on Temporary Measures for Stabilization of Specified Depressed Industries (Industry Stabilization Law)" was enacted. A basic stabilization plan was prepared—incorporating the opinions of an advisory council—for each of the specified depressed industries (14 industries)⁴¹, which included measures for stabilizing employment. A major characteristic of this phase was that all policies targeted industries in structural recession and adopted measures to promote changes in industrial structures, such as facilitating disposal of excess equipment held by companies, providing financial support, and granting vocational training benefits to workers who were leaving their jobs. In 1983, the industries covered by this plan were increased to 26^{42} by the "Law on Temporary Measures for the Structural Improvement of Specified Industries (Structural Improvement Law)."

After the mid-1990s

Despite adopting adjustment policies targeted at industries in structural recession, efficient adjustment of management resources was barely achieved, and the Japanese economy struggled in the prolonged recession during the post bubble economy era. In such a situation, actions such as cross-industry structural conversion and employment measures were adopted. The "Special Measure Law for Reviving Industrial Vitality (Industrial Revitalization Law)"⁴³ of 1999 exemplifies such actions. One of the major characteristics of this law was that the conventional eligibility using an industry as a unit was replaced by aid provided to a company, including an individual, as a unit; no limitation was imposed on the type of business. Authorized business restructuring plans that have been submitted for the removal of overall excess equipment from industries in Japan encompass a wide range of industries such as steel, banks, automobiles, information and communication equipment, and department stores, which amount to 420 cases as of March 31, 2008.

⁴³ The objective of this law is described as "considering that the improvement of productivity is important for the continuous development of the Japanese economy, contributing as special measures to the revival of Japan's industries by carrying out business reconstruction, reorganization of joint enterprises, reuse of management resources, business innovation using technology and measures to facilitate the integration of management resources while taking into account the employment stability, taking measures to assist the revitalization of small- and medium-sized businesses and facilitate business recovery, and promoting the use of intellectual property rights in business activities" (the Ministry of Economy, Trade and Industry "SANGYOU KATSURYOKU SAISEI TOKUBETSU SOCHI HOU NO GAIYOU OYOBI NINTEI JISSEKI NI TSUITE").

⁴¹ As of 1981, the 14 specified industries included nylon long fiber manufacturing, polyacrylonitrile short fiber manufacturing, polyester long fiber manufacturing, polyester short fiber manufacturing, urea manufacturing, ammonia manufacturing, worsted spinning, linerboard manufacturing, manufacturing of steel ingot for rolling or semi-finished steel products made of plain steel that use open-hearth and electric furnaces, aluminum smelting, shipbuilding, ferrosilicon manufacturing, phosphoric acid manufacturing through wet process, and cotton spinning.

⁴² As of 1986, the 26 specified industries included the manufacturing of steel ingot for rolling or semi-finished steel products made of plain steel that use electric furnaces, aluminum smelting, nylon long fiber manufacturing, polyacrylonitrile short fiber manufacturing, polyester long fiber manufacturing, viscose short fiber manufacturing, ammonia manufacturing, urea manufacturing, phosphoric acid manufacturing through wet process, manufacturing, manufacturing of high-carbon ferrochromium, ferronickel manufacturing, manufacturing, manufacturing, linerboard manufacturing, ethylene manufacturing, polyolefin manufacturing, manufacturing of polyvinyl chloride resin, ethylene oxide manufacturing, styrene manufacturing, manufacturing of rigid polyvinyl chloride tubes, sugar manufacturing, cement manufacturing, and electric wire and cable manufacturing.

Assistance provided to	Workers	Companies	Agriculture
Assistance measures	 Provide information to support job changes and reemployment; provide opportunities for consultation. Provide companies accepting transferred and reemployed workers with financial assistance. 	 Provide information on funds, labor, technology, etc. and opportunities for consultation. Provide loan assistance to ensure management stability and competitiveness. Simplify the procedures for change of business for small- and medium-sized companies. 	 Compensate agricultural workers for a loss of income caused by a rapid increase in import. Help improve the competitiveness of products that are likely to suffer losses due to the adoption of FTAs (branding). Mid- and long-term agricultural structure adjustment (income stabilization for each farm family, measures for the easy retirement of elderly farmers, etc.).

Table 2-4-24 Overview of the FTA complementary measures of Republic of Korea

Sources: Okuda, S. (2007) Korea-U.S. FTA, media reports

(Implications for Japan)

As discussed thus far, other countries are initiating structural adjustment of domestic industries that is consistent with free trade by adopting systems for trade adjustment assistance and facilitating the improvement of industrial and employment structures.

As described in Chapter 2, with the increase in the cross-border flow of people, materials, money, technology, and knowledge associated with globalization, global value chains that include Japanese industries develop further and the processes and operations remaining in the country become the target of selection and concentration. Under such conditions, Japan's policies for industrial structure adjustment must also be modified on the assumption of globalization. In Japan, there exist certain industries with extremely low productivity; therefore, trade adjustment assistance and other programs must be adopted in order to improve their productivity, and more active measures must be adopted in order to globalize the Japanese economy⁴⁴.

(4) The importance of inward direct investment and internationalization of the domestic market environment

As mentioned previously, other countries are initiating domestic structural adjustment that is consistent with free trade by adopting systems for trade adjustment assistance. Trade adjustment assistance, as the name suggests, is a structural adjustment scheme limited to traded goods industries. For structural adjustment that includes non-traded goods sectors such as personal services, it is important to respond to the changes in the industrial structure brought about by globalization while taking not only trade, but also direct investment into perspective. The financial industry in the United Kingdom and the IT service industry in Ireland flourished as a result of active participation of foreign-owned companies in domestic markets. These are good examples of active inward direct investment that were successful.

In Japan, too, expanding the inward direct investment is important in order to improve the productivity of the entire industrial sector, including the service industry that frequently involves non-traded goods⁴⁵. It is essential that inward direct investment is expanded and further

⁴⁴ The prospect of adding high value to Japan's agriculture and expanding exports will be discussed in Chapter 3-3.

⁴⁵ There are sectors, such as off-shoring, that can engage in international trade by using IT (IT services,

internationalization of the domestic market environment is promoted by attracting high-productivity foreign companies and engaging in cooperative work with globally-competitive companies through which active transformation of the domestic industrial structure is encouraged⁴⁶.

However, inward direct investment in Japan remains at an internationally low level⁴⁷ despite a recent increasing trend. While the factors hindering direct investment in Japan may vary widely, one of the major factors is the delay of the domestic market environment in its response to internationalization. The structural problem of the delayed internationalization of the domestic market environment is also considered as one of the key factors. In this section, two aspects-difficulties in securing skilled human resources in Japan and the closed and unique nature of the Japanese market environment-will be focused on in order to conduct a detailed examination of the factors that hinder direct investment in Japan.

(a) Difficulties in securing skilled human resources in Japan

Numerous foreign-based companies consider difficulties in securing skilled human resources as a factor that hinders their business activities in Japan. In the "Survey on Attitudes of Foreign-Affiliated Companies toward Direct Investment in Japan" conducted every year, the 2007 results⁴⁸ indicate "securing skilled human resources" as the most hindering factor (66.2%). On the other hand, the 2005 results of the same survey indicate "high cost of business" as the most obstructive factor; however, the results since the 2006 survey have been reverse. In JETRO (2008b)⁴⁹, the largest percentage, i.e., 30%, of foreign-owned companies revealed the problem of "language" as the factor that would hamper their decision to invest in Japan, thereby suggesting that foreign language skills would have to be improved in order to promote direct investment in Japan. Two of the reasons for the lack of foreign language skills of Japanese human resources are inadequate English education and a low-level of acceptance of foreign workers. In Japan, the year in school in which English education begins is later than in other countries in Asia, which is a likely reason for the unsatisfactory English skills⁵⁰ (see Table 2-4-25).

services for establishments, etc.).

⁴⁶ Some argue that the entry and exit of companies are both sluggish and this causes low productivity. For example, Kim, Kwon and Fukao (2007) analyzed in "KIGYOU, JIGYOUSHO NO SANNYU, TAISHUTSU TO SANGYOU REBERU NO SEISANSEI" that the renewal function, by which companies and establishments with high productivity expand and those with low productivity close down, had been inactive in the manufacturing industry since the 1980s and had also declined in a majority of the non-manufacturing industries after 1997.

 ⁴⁷ See Chapter 4-3 for the current state of inward direct investment in Japan.
 ⁴⁸ JETRO (2008a) "Survey on Attitudes of Foreign-Affiliated Companies toward Direct Investment in Japan 2007" (survey period: September and October 2007; respondents: 2,766 companies).

JETRO (2008b), "OUBEI ASIA NO GAIKOKU KIGYOU NO TAINICHI TOUSHI KANSHINDO CHOUSA 2007" (survey period: December 2007 and January 2008; respondents: 209 companies; method: telephonic interviews with the management).

⁵⁰ The low level of acceptance of highly skilled foreign workers is also considered as a factor responsible for the small number of workers equipped with adequate foreign language skills. See Section 2-2 of this chapter for details regarding the acceptance of highly skilled workers in Japan and other countries.

Table 2-4-25 Yes	ar in school i	n which I	English e	ducation l	begins in	Asian counties

Country	Year in school in which English education begins
China	English is taught as the first foreign language as part of lower secondary education. Elementary schools in which conditions permit are allowed to begin foreign language education (English) in the third grade.
Republic of Korea	From the third grade in elementary school (from the first grade in certain government- funded experimental schools).
Malaysia	English is taught from the first grade in primary school until the fifth year in secondary education as a requirement that must be included in major examinations. In primary and secondary schools, mathematics and science have been taught in English since 2004. While not all Malaysian people are proficient and fluent in English as a second language, they at least possess sufficient vocabulary to communicate with others without difficulties.
Singapore	Basic education (English, arithmetic, and "mother tongue"") is provided from the first to fourth year in primary school, followed by applied learning in the next two years.
Thailand	From the first year in primary school
Indonesia	English education begins in middle or high school in the official school system. Except in international schools in Jakarta, English is rarely taught in primary schools.
India	English education is compulsory in all states other than Bihar, and the classes vary in different states. In general, it must begin between Class VI and X in a majority of the states (secondary education).
(Ref.) Taiwan	From the third year in elementary school

Sources: The Website of the Overseas Vocational Training Association, and the minutes and handouts for the Third and Ninth Special Committees on Foreign Languages, School Curriculum Division, Elementary and Secondary Education Bureau, the Central Council for Education of the Ministry of Education, Culture, Sports. Science and Technology.

(b) Closed and unique nature of the Japanese market environment

In the "Survey on Attitudes of Foreign-Affiliated Companies toward Direct Investment in Japan"⁵¹ introduced earlier, 50.6% of foreign-affiliated companies stated that the "closed and unique nature of the Japanese market environment" was one of the hindering factors in addition to "securing skilled human resources." The factors of this closed and unique nature included "the society of Japanese language" selected by the largest percentage—17.9%—of the respondents, which indicated the language barriers related to "difficulties in securing skilled human resources in Japan." This was followed by "business within a group of companies (keiretsu)" selected by 16.2% of the respondents. The fact that "business within a group of companies (keiretsu)" was selected by a large number of the respondents in this study and that 69% of the foreign-based companies in JETRO (2008b) considered the Japanese market as a single market rather than a gateway to Asian markets indicates the importance of establishing more open and free trade practices in order to promote direct investment in Japan.

The "Survey on Attitudes of Foreign-Affiliated Companies toward Direct Investment in Japan"⁵² conducted in 2006 revealed the method used by foreign-affiliated companies for securing skilled human resources in Japan. According to this survey, 61.1% of foreign-affiliated companies were securing human resources through local recruitment rather than assigning personnel from their countries of origin. As one reason for this trend, the survey indicates a possibility that these foreign companies recognize that the only employees who would be able to satisfy the high level of demand of

⁵¹ JETRO (2008a).

⁵² JETRO (2007b).

customers in Japan were the locals. Therefore, the uniqueness of the Japanese market may potentially be limiting human resources that are capable of adapting themselves to the Japanese market to a narrow range. Consequently, acquiring human resources may become difficult, thereby creating a vicious circle that further impedes direct investment in Japan. In this sense, the hindering factors described with regard to difficulties in securing skilled human resources and the closed and unique nature of the market environment are considered mutually influential.

The "Japan Investment Council 90" held in March 2006 agreed on the goal to "achieve the balance of direct investment in Japan of 5%, or double in terms of GDP ratio, by 2010" and established the "Japan Direct Investment Promotion Program" in June 2006 in order to initiate various activities⁵³. This program ascribes importance to the promotion of direct investment in Japan based in local communities. Therefore, preparing the entire country, including those regions and groups of human resources that have not been part of globalization, for the acceptance of global management resources is likely to become important.

(5) Efforts for utilizing potential manpower

In Japan, which is facing a declining birthrate and an aging population, adopting measures to encourage greater participation of potential workers in the labor market is currently a serious issue. Certain people indicate that in Japan, the elderly and women with extensive knowledge and experience are not provided with adequate opportunities to work⁵⁴, which constitutes an important issue that calls for improvement. The following section investigates the possibility of employing the elderly and women in Japan as potential manpower.

(Efforts for the extended utilization of the potential manpower of the elderly)

The labor force participation rate of the elderly in Japan is considerably higher than that in the US and European counties⁵⁵, moreover, their willingness to work is also rather strong.

In accordance with the Revised Law Concerning Stabilization of Employment of Older Persons enforced in April 2006, companies and businesses are obligated to comply with any one of the following aspects: a) abolition of a mandatory retirement age; b) raising of the retirement age; or c) adoption of a continued employment system. In addition, the revised Employment Measures Law requires that, commencing from October 2007, age restrictions be prohibited when recruiting and hiring workers.

However, the matter in question is whether companies and businesses could employ the elderly in such a manner that their "experience" and "abilities" could be effectively applied rather than simply as labor; therefore, the optimal allocation and treatment of the elderly must be sufficiently considered (see Figure 2-4-26).

⁵³ See Chapter 4-4. for the latest trends in the efforts to increase direct investment in Japan.

⁵⁴ The Ministry of Economy, Trade and Industry (2006), White Paper on International Economy and Trade 2006.

⁵⁵ The labor force participation rate of men in Japan is the fourth highest among OECD counties at 81% and the same rate for elderly men also reaches 80%, exceeding the OECD average of 63% (OECD (2008a) "Economic Policy Surveys: Japan").



Figure 2-4-26 International comparison of labor force participation rate of the elderly (men)

Notes: 1. The figures for France and the Netherlands are those for the year 2005. 2. The survey for Sweden included people up to 64 years of age. Source: LABORSTA Internet (ILO)

(Efforts to utilize the potential manpower of women)

In contrast to the elderly, the employment rate of women in Japan remains at a low level. Therefore, discovering the potential manpower of Japan requires that an economic and social environment be created in which women are able to maintain both their family life and jobs and fully apply their skills without losing their willingness to work, which will encourage their active entry into workplaces.

Low-employment rate of women in Japan and an "M-shaped curve"

The labor force participation rate of women in Japan by age group illustrates, despite a gradual improvement⁵⁶, an "M-shaped curve," which indicates a fall in employment around the ages of childbirth (see Figure 2-4-27). Thus, this M-shaped curve must be eliminated in order to ascertain the potential labor force participation rate of women.

A recent study⁵⁷ finds an increase in the percentage of irregular employment after the valley of the M-shaped curve⁵⁸ in the comparison of the forms of employment for women before the ages in the valley. In order to utilize the potential labor force of women, the factors forming the valley of the M-shaped curve must be eliminated, and regardless of whether employment is regular or irregular, women must be able to continue accumulating human capital⁵⁹ according to the different stages of

⁵⁶ The ILO statistics indicate that the labor force participation rate of women in their 20s and 30s in Japan has been improving in recent years.

⁵⁷ Oga, T. (2007), "JOSEI NO ROUDOURYOKURITSU M-JI KAABU NO JOUSHOU YOUIN."

⁵⁸ On the left-hand side of the M-shaped curve representing the ages before the mid-30s, women are employed mostly as regular workers and leave the labor market once when they are in their mid-30s for childcare or other domestic work. They enter the labor market again as irregular employees when they are in their 40s, which is illustrated on the right-hand side of the M-shaped curve.

⁵⁹ "Human capital" encompasses a wide range of concepts, including "intellectual abilities" such as skills and knowledge, motivation, interpersonal skills, and health conditions, rather than mere production means and labor. Gary Becker, a leading expert in human capital theory, states that human capital investment

their lives. For the former, it is important that the most significant factor forming the M-shaped curve—the burden of housework, childcare, and nursing care—be reduced, a work environment be created in which women find their work rewarding and are able to fully apply their abilities, and such conditions be established that enable them to assume responsibility at work regardless of gender while satisfying various desires at each stage of their lives. The latter requires that fair treatment of irregular employees is ensured and a system of accumulating human capital regardless of the form of employment be constructed.



Sources: World Statistics 2008. (Ministry of Internal Affairs and Communications), LABORSTA Internet (ILO)

(a) Measures to reduce the burden of housework, childcare, and nursing care

When a woman continues to work in a manner that befits each phase of her life—such as marriage and childbirth—beyond the dualism of regular and irregular employment, an issue arises of who assumes responsibility for the housework and childcare, which have been traditionally assumed by the woman. Matsuda $(2007)^{60}$ demonstrated a positive correlation between the hours consumed for housework and childcare by men and the employment rates of women in their early 30s in different countries and argued that reducing the burden of housework and childcare was one of the solutions for increasing the employment of women⁶¹.

includes school education, OJT, healthcare, residential relocation, etc., and it improves skills, knowledge and health conditions, thereby increasing income and consumption (Ministry of Economy, Trade and Industry (2007b) "Report by the Basic Policy Committee, Industrial Structure Council: Toward the Simultaneous Achievement of Economic Growth and Fairness").

⁶⁰ Matsuda (2007), RIETI Policy Symposium: Identifying Conditions for Women's Active Participation in Society and "Raising Children and Women's Employment."

⁶¹ The average time spent for housework and childcare per day in Japan is 0.8 hours for men and 5.7 hours for women (as of 2001), and this disparity between men and women is extremely large as compared with that in other countries. For example, in Australia, men spend 3.0 hours and women spend 4.6 hours on housework and childcare (as of 1997) (Cabinet Office (2007), *White Paper on Gender Equality 2007*). In

(b) Measures to eliminate the dualism of "regular and irregular" employment

Numerous business establishments in Japan are believed to use both the regular and irregular forms of employment. While irregular employees are, in a large number of cases, permitted to work relatively flexible hours and rarely have constant overtime work, long-term employment is usually not secured and opportunities for pay raises, bonuses, and vocational education and training are often fewer than those of regular employees. In particular, the lack of opportunities for education and training poses a serious problem of impeding human capital accumulation.

In fact, it has been found that investment in human capital, particularly irregular employees, is rarely made in Japan⁶². Since the percentage of women among irregular employees is high⁶³, reasonable education and training must also be provided to irregular employees in order to make good use of the human capital possessed by women.

Some argue that such problems could be solved by promoting the manner of working that is in between regular and irregular employment rather than the dualism of these forms, and permitting the selection of work styles that fit the stages of the lives of workers. In order to eliminate the so-called "dualism,"⁶⁴ opportunities for adequate vocational education and training must be provided to irregular employees and their abilities must be appropriately evaluated.

Differences between men and women evident in work levels and the causes

Some of the factors that are believed to hinder the employment of women are differences in the wages and treatment between men and women⁶⁵ (see Figure 2-4-28).

Preceding studies suggest that major factors contributing to wage disparities between men and women include "job ranking" and "years of continuous employment," arguing that wage disparities between men and women are caused primarily by differences in the number of years continuously worked and job promotion⁶⁶.

order for all people willing to work, including women, to be able to participate in the labor market and make marriage, childbirth, and childcare that is desired by the people achievable, balancing work and life through changes in working styles is important.

⁶² The percentage of establishments conducting "systematic OJT" for regular employees is 52.2% and those conducting "off-the-job training" have increased to 63.1%; on the other hand, for irregular employees, the percentage of establishments conducting systematic OJT are limited to approximately 20% (Cabinet Office (2007b), *Economic White Paper 2007*).

⁶³ The ratio of part-time workers in Japan is between 10% and 15% for men, but over 40% for women. The ratio of female part-time workers in Japan is level considering the international standard (OECD "Employment Outlook").

⁶⁴ The Netherlands is known for having little difference in the treatment and scope of work between regular and irregular employees, which is known as the Dutch model. See Column, "The policies of France and the Netherlands that emphasize mandatory continuous employment and fair treatment" for details.

⁶⁵ A questionnaire survey conducted by the Cabinet Office among women indicates that 60% of the respondents believe that women are unfairly discriminated against in their wages (Cabinet Office "Public Opinion Survey on the Gender Equality Society", July 2002).

⁶⁶ The *White Paper on Gender Equality 2003* of the Cabinet Office (2003) breaks down the factors causing wage disparities between men and women into the number of years of continuous work, job ranking, ages, educational background, etc. and concludes that the number of years of continuous work and job ranking are highly significant.

The number of consecutive years worked by women is smaller than that worked by men most likely because, as previously noted, women leave the labor market once for marriage or childcare. Consequently, the elimination of the M-shaped curve is likely to reduce the disparity in the number of years of continuous work between men and women, thereby contributing to closing the gap between the wages of male and female workers⁶⁷.

With regard to the difference in promotion between men and women, the percentage of women among managerial employees in Japan in extremely low as compared with that in other countries (see Figure 2-4-29). Since results of empirical analysis indicate that discrimination by managers against women is a factor causing the delay in the advancement of women⁶⁸, the Equal Employment Opportunity Law that prohibits sex discrimination in assignment and promotion must be complied with and promotion of women to management positions, improvement in workplace culture, and other positive actions of companies⁶⁹ must be encouraged.





Source: OECD, Society at a Glance 2006.

⁶⁷ Under Japan's "seniority-based wage system," which is believed to be an employment practice that is characteristic of Japan, the number of years continuously worked appears to determine job ranks under the same employer. Based on this concept, the disparity in promotion between men and women in Japan is likely to be affected significantly by the number of years employed by the same employer. Therefore, a reduction of the difference in the number of years of employment that was indicated in paragraph (a) is considered to help reduce the disparity in promotion between men and women.

⁶⁸ Kawaguchi, D., (2004) "JOSEI JUGYOUIN HIRITSU TO RIEKIRITSU: KIGYOU KATSUDOU KIHON CHOUSA WO MOCHIITA BUNSEKI."

⁶⁹ "Positive actions" refer to active and voluntary efforts of individual companies aiming to eliminate the disparities between male and female workers derived from stereotypical ideas of gender roles, their treatment in the personnel management in the past, workplace practices led by man, etc.

Figure 2-4-29 Percentages of women in workers and managers



Notes: 1. The figures of China, France, the Netherhands and the U.K. are of 2005.
 2. The managerial workers in countries other than Japan are "Major Group 1" of ISCO –88
 Source: Ministry of Internal Affairs and Communications, "Labor Force Survey"; ILO, "LABORSTA Internet".

[Column 16] The policies of France and the Netherlands that emphasize mandatory continuous employment and fair treatment

France and the Netherlands are making efforts to prevent women from leaving the labor market for reasons such as childcare.

France

The French law requires that working parents, whether farther or mother, select either to temporarily stop working and take a leave of absence for childcare (from one year up to three years) or to reduce their working hours and work part time. This permits them to flexibly select the form of employment while maintaining their regular employee status. In addition, after the end of this period, the previous job or, at least, a similar job that pays the same wages is guaranteed at the workplace.⁷⁰ Workers have the priority to change from part-time to full-time employment and vice versa, and their employers must present a list of available positions to workers who request such a change. Any employee who refuses to accept his/her employee's request for a change in the form of employment must explain the reason⁷¹.

⁷⁰ Cabinet Office. (2007a), "World Economic Trend Spring 2007." This was used as a reference for the efforts of France.

⁷¹ Kawaguchi, M. (2002), "PATO TAIMU ROUDOU NO HOUSEIDO: FURANSU." *KAIGAI ROUDOU JIHOU* 2002 No. 331 (extra issue).

On the other hand, for full-time workers, the legal working hours were reduced to 35 hours a week (or 1,600 hours a year) in 2000 in order to enable them to improve their lives through increased leisure time and facilitating housework⁷².

The law provides that part-time workers be treated the same as full-time workers, their hourly wages be equal to those of full-time workers engaging in a job with the same value, and they must enjoy the rights to holidays and leaves of absence equal to those of full-time workers⁷³.

The Netherlands

In the Netherlands, labor, management, and the government established the Wassenaar Agreement in 1982, and agreed that "the management would strive to accept part-time workers and secure employment, workers would not demand an extreme pay raise, and the government—as a rule—would not intervene in wage negotiations."⁷⁴ The Netherlands worked to expand part-time jobs as part of the government's policy.⁷⁵ which encouraged work-sharing and resulted in diversified forms of employment and increased number of employees.

In the Netherlands, like in France, the hourly wages of part-time workers must be equal to those of full-time workers employed in equivalent jobs, and part-time workers are given the right to corporate pension-the amount of which is proportional to the number of hours worked-and are guaranteed to be treated the same as full-time workers with regard to aspects such as dismissal restrictions, unemployment insurance, and disability insurance.

As a result, workers in the Netherlands have been able to select from three forms of employment according to individual lifestyle-"full-time employment" with 36 to 38 hours of work and two days off per week, "large part time employment" with approximately 30 to 35 hours of work and three days off per week, and "half time employment" with approximately 20 hours of work⁷⁶.

A comparison of job satisfaction experienced by men and women between the Netherlands and Japan after dividing the forms of employment into "full-time work"⁷⁷ and "non-full time work" indicates that in the Netherlands the difference between satisfaction with "full-time work" and "non-full-time work" was smaller for both men and women than that in Japan. It is likely that the equal treatment of full-time and part-time workers affects job satisfaction.

⁷² Ito, S. (2003), "OUSHUU NO JINKOU GENSHOU TO ROUDOU SHIJOU KAIKAKU."

⁷³ On the other hand, part-time workers cannot simply be considered to cost less than full-time workers due to the mandatory membership in the social security system and insurance coverage that must be paid for regardless of the number of hours worked. ⁷⁴ The Ministry of Economy, Trade and Industry (2002), White Paper on International Economy and

*Trade 2002.*⁷⁵ There is a view that the labor force participation of women with children in the Netherlands has been r_{1}^{2} work that corresponds supported through part-time employment based on the country's system of part-time work that corresponds to the inadequate availability of childcare services, unlike the extensive childcare services of France, and a cultural climate that does not encourage full-time employment of mothers (the Ministry of Economy, Trade and Industry (2005), White Paper on International Economy and Trade 2005).

⁷⁶ Yamada, H. (2003), *CHINGIN DEFURE*.

⁷⁷ For Japan, the comparison is based on "regular employment."

Column Table 16-1 Job satisfaction by career type							
		Overall perspective		Job-orien	Job-oriented perspective		ented perspective
Men		Career prospects	Satisfaction with overall job	Challenging work	Opportunities to use my own ideas	Extra time to spend for leisure	Accomplish both outside and domestic work
	Regular full-time job (a)	3.76	3.87	3.94	4.03	3.45	3.18
the Netherlands	Various temporary jobs (b)	3.45	3.83	3.90	4.06	3.47	3.27
reculeitanus	Difference (a–b)	0.31	0.04	0.04	-0.03	-0.02	-0.09
	Regular full-time job (a)	2.93	3.26	3.28	3.32	2.93	2.97
Japan	Various temporary jobs (b)	2.39	2.97	2.93	2.84	3.48	3.23
	Difference (a–b)	0.54	0.29	0.35	0.48	-0.55	-0.26
		Overa	ll perspective	Job-orien	ted perspective	Home-ori	ented perspective
			•				
	Women	Career prospects	Satisfaction with overall job	Challenging work	Opportunities to use my own ideas	Extra time to spend for leisure	Accomplish both outside and domestic work
	Women Regular full-time job (a)	Career prospects 3.45	Satisfaction with overall job 3.86	Challenging work 3.89	Opportunities to use my own ideas 4.01	Extra time to spend for leisure 3.46	Accomplish both outside and domestic work 3.32
the Netherlands	Women Regular full-time job (a) Various temporary jobs (b)	Career prospects 3.45 3.20	Satisfaction with overall job 3.86 3.89	Challenging work 3.89 3.89	Opportunities to use my own ideas 4.01 3.97	Extra time to spend for leisure 3.46 3.50	Accomplish both outside and domestic work 3.32 3.30
the Netherlands	Women Regular full-time job (a) Various temporary jobs (b) Difference (a–b)	Career prospects 3.45 3.20 0.25	Satisfaction with overall job 3.86 3.89 -0.03	Challenging work 3.89 3.89 0.00	Opportunities to use my own ideas 4.01 3.97 0.04	Extra time to spend for leisure 3.46 3.50 -0.04	Accomplish both outside and domestic work 3.32 3.30 0.02
the Netherlands	Women Regular full-time job (a) Various temporary jobs (b) Difference (a–b) Regular full-time job (a)	Career prospects 3.45 3.20 0.25 2.97	Satisfaction with overall job 3.86 3.89 -0.03 3.42	Challenging work 3.89 3.89 0.00 3.21	Opportunities to use my own ideas 4.01 3.97 0.04 3.39	Extra time to spend for leisure 3.46 3.50 -0.04 3.23	Accomplish both outside and domestic work 3.32 3.30 0.02 3.13
the Netherlands Japan	Women Regular full-time job (a) Various temporary jobs (b) Difference (a–b) Regular full-time job (a) Various temporary jobs (b)	Career prospects 3.45 3.20 0.25 2.97 2.29	Satisfaction with overall job 3.86 -0.03 3.42 3.32	Challenging work 3.89 0.00 3.21 3.10	Opportunities to use my own ideas 4.01 3.97 0.04 3.39 3.31	Extra time to spend for leisure 3.46 3.50 -0.04 3.23 3.92	Accomplish both outside and domestic work 3.32 3.30 0.02 3.13 3.67

Notes: 1. The source material is "KOUTOUKYOUIKU TO SHOKUGYOU NI KANSURU NICHIOUHIKAKUCHOUSA (comparative study of higher education and occupation between Japan and Europe)," a joint project of international research groups in Japan and 11 European countries.

2. Figures in the table represent the averages of points scored on a scale of 1 to 5 from "fully satisfied" to "not satisfied at all."

3. The "difference" in the level of satisfaction by type of career was added to each item.

Source: Yamada. H. (2003), Wage Deflation.

Original source: Kosugi, R., JAKUNEN PATOTAIMU, YUUKIGENKOYOUSHA NO GENJOU TO MONDAI.

2. Labor market systems and policies aiming to take in the vitality of Asia

In light of its population decline, as explained in Section 1 of this chapter, Japan must strategically respond to the globally increasing trend of people's movement and "competition for skilled workers."

In particular, the value creation in Japan can be advanced and innovation encompassing other parts of Asia can be facilitated by accepting superior human resources from Asia, which comprises approximately half of the world's population, and by actively promoting human resource development in Asia. From such a perspective, the following discussion examines the policies concerning the movement of people and seeks the appropriate or ideal market system and policy for Japan.

(1) Foreign workers rapidly increasing in developed countries but not in Japan

As already described in Chapter 2-1, the cross-border movement of people has been increasing in major countries around the world. While the status of accepting foreign workers varies substantially depending on the country⁷⁸, OECD statistics indicate that the percentage of workers from foreign countries in Japan is relatively low among the OECD member countries (see Figure 2-4-30)⁷⁹.

⁷⁸ A comparison of the percentages of foreign workers in the OECD countries in 2005 reveals that the figures exceed 10% in countries such as Australia, the United States, Canada, and Switzerland, suggesting a significant presence of foreign workers. In addition, in most countries, the percentage has grown larger in 2005 from that in 2000, thus reflecting more active acceptance of foreign workers in recent years.

⁷⁹ The percentage of foreign workers newly permitted to enter the country (excluding seasonal workers) in the entire labor population, however, indicates that Japan's share is comparable to those of the United States, the United Kingdom, Germany, and France (the Japan Institute for Labor Policy and Training,



Since the domestic labor market is affected partly by the acceptance of foreign workers, major developed countries including Japan have adopted, as a rule, a permit system for acceptance.

The movement of people, particularly those with high technical skills and sophisticated knowledge, has been increasing on a global scale as with the progress of globalization and the growth of the knowledge-based economy. Amid such trends, many countries are beginning to recognize the need for gathering superior human resources from all round the world in addition to domestic workers in such fields as management, research, and technology to ensure their sustainable economic growth.

For this reason, in recent years, major developed countries and some Asian countries have been taking active measures to accept foreign workers, such as easing immigration control for part of specialized or technical personnel including business managers, researchers, and engineers as exceptions. The "labor market test" that will be introduced in Column 17 is an example of the efforts made by these countries in an attempt to acquire necessary human resources (see Table 2-4-31).

In Japan, too, the demand for some specialized and technical professionals has been rising amid the industrial advancement and growth of the knowledge-based economy, and there has been growing concern about the shortage of such workers. The effective ratios of job offers to job seekers and the ratios of new job offers to new job seekers by type of job reveal that the ratios of mechanical and electrical engineers and data processing specialists have been at relatively high levels since 2003 in comparison to those of other jobs (see Figure 2-4-32). In addition to the decrease in the working-age population, the number of science students in higher education has been declining, which poses serious concerns in terms of a probable future shortage of engineers in Japan⁸⁰. Employing highly skilled foreign workers in the science and technology fields, therefore, constitutes an important issue

Databook of International Labor Statistics 2008).

⁸⁰ A future shortage of engineers is also a growing concern in the United States and other countries around the world; this issue was on the agenda in the "Engineering Executive Forum" held on November 29 and 30, 2007 (Ignatowski (2007), "Global engineering forum targets looming engineering shortage").

for this country (see Figure 2-4-33)⁸¹.

The attempt to cover the decline in the labor population simply by accepting more non-Japanese nationals would not be appropriate, considering the consequences on the domestic labor market. As for highly skilled human resources, on the other hand, the time may be ripe for considering more active acceptance of non-Japanese workers for the industrial and productivity improvement of Japan.

Therefore, the following first describes the systems of accepting foreign workers in other countries and discusses how Japan should accept workers from other countries.

		How to limit the range of acceptance					
		Description of	Job-relat	ed matters	Matters other that	n job-related	
Type of acceptance		acceptance method	Limitation based on industry or type of job	Limit by job abilities (education, qualifications, years of experience, etc.)	No limitation on job types, industries, abilities, etc.	Limitation based on nationality	
orkers	Labor market test	Accept on the condition that vacancies cannot be filled in the domestic labor market is proven	Germany <work permit=""> U.S. <agricultural seasonal<br="">workers> Canada <temporary employment></temporary </agricultural></work>	U.K. <work permit=""> U.S. <labor immigrants<br="">(EB-2, 3)></labor></work>	France <temporary residence permit> U.S. <non-agricultural temporary workers></non-agricultural </temporary 		
ae number of w	Quantity distribution	Set the maximum number of overall workers to be accepted and reject anyone in excess.	U.S. <specialists, etc.=""></specialists,>	U.S. <labor immigrants<br="">(EB-1 through 5)></labor>	U.S. <non-agricultural temporary workers></non-agricultural 	Germany <contract workers> Germany <guest workers></guest </contract 	
focus on th	Employment tax	Employers are taxed on every foreigner they hire	Singapore <s-pass work<br="">permit></s-pass>			Singapore <work permit for Malaysians, etc.></work 	
ц	Maximum employment ratio	Set the maximum percentage of foreign workers in the employees at each company	Singapore <s-pass work<br="">permit></s-pass>			Singapore <work permit for Malaysians, etc.></work 	
quality of workers	Adjustment of the range of acceptance	No quantity limitation on acceptance when satisfying certain criteria	Japan <specialized technical<br="">fields among the types of resident status> Korea <specialized technical<br="">fields among the types of resident status></specialized></specialized>	Singapore <p-pass, q-<br="">Pass></p-pass,>			
Focus on the	Point system	Count factors necessary for judgment as points and accept applicants with above certain points		Canada <technical worker<br="">immigrants> U.K. <advanced human<br="">resource immigration programs></advanced></technical>			

Table 2-4-31 Major systems of accepting foreign workers and types of methods of adjustment for acceptance in different countries

Sources: Ministry of Health, Labor and Welfare (2002), *Study Group Report on Employment Issues for Foreigners;* Japan Institute for Labour Policy and Training, (2007),

AJIA NI OKERU GAIKOKUJINROUDOUSHAUKEIRESEIDO TO JITTAI, and Website of the Embassy of Canada.

⁸¹ The "Third Immigration Control Plan" established in March 2005 by the Immigration Bureau of the Ministry of Justice also states that more aggressive procurement of foreign workers in specialized and technical fields first becomes important when the working age population sharply decreases.


Figure 2-4-32 Trends in the effective ratios of job offers to job seekers and the ratios of new job offers to new job seekers

Notes: Regular workers including part-time employees

Sources: Minister of Health, Labor and Welfare, SHOKUGYOU ANTEI GYOUMU TOUKEI



Trends in the ratios of new job offers to new job seekers

Construction and civil engineers in the specialized and technical jobs

Notes: Regular workers including part-time employees

Sources: Minister of Health, Labor and Welfare, SHOKUGYOU ANTEI GYOUMU TOUKEI



Figure 2-4-33 Composition ratios of the number of students by university department

Sources: Ministry of Education, Science and Culture; Ministry of Education, Culture, Sports, Science and Technology, "School Basic Survey: Higher Education" .

[Column 17] The mechanisms of labor market tests in different countries: The intended economic rationality

(What is a labor market test?)

The labor market test is a system of accepting foreign workers into the country, which is used only when recruitment in the domestic labor market is proven to be impossible in such a case that domestic workers cannot fill job vacancies within a certain period. This system has been adopted in Germany, France, the United Kingdom, the United States, Canada, and some other countries.

The systems in these countries commonly emphasize economic rationality ensured through examinations (tests) of whether the employment of foreign workers (1) will not replace domestic workers and (2) will not cause an unreasonable reduction in wages of jobs that are similar to those in which the foreign workers engage⁸². To this end, these labor market tests require applications filed with the country's government or administrative institution by the employer or business owner attempting to hire a foreign worker.

This may affect the short-term supply-demand conditions, and it allows the supply of foreign workers required by employers and business owners that cannot be provided domestically. However, this system also involves some shortcomings. For instance, substantial administrative expenses are associated⁸³, foreign workers already residing in the country are not eligible for the labor market

⁸² Keizai Doyukai (Japan Association of Corporate Executives) remarked on Japan's acceptance of foreign workers that "the country should adopt an approach wherein, first, the jobs and industries that could not be fully staffed by domestic workers would be carefully selected through labor market tests and, then, the number of workers accepted and types of jobs filled in Japan would be determined for each country through bilateral agreements such as EPAs so as to maintain the control of incoming workers" (Keizai Doyukai. (2008), "Revitalization of Japan and Strengthening of Its Competitiveness").

⁸³ The Ministry of Economy, Trade and Industry (2003), White Paper on International Economy and

tests; and closure of inefficient businesses that should occur in the mid to long term is prevented, which may hamper the enhancement of the industrial structure⁸⁴.

(Efforts made by other countries)

The labor market test carried out in some countries is outlined below⁸⁵.

Germany

To issue a work permit in Germany, public job placement offices⁸⁶ conduct a four-week labor market test to ensure that the job vacancies cannot be filled by Germans or people from other EU member countries and that the employment conditions of the German people will not be adversely affected.

Professions that require a "labor market test" include (1) foreign language instructors, certified cooks, IT engineers, and certified caregivers such as nurses and elderly caregivers (the employment period in these professions is limited to three years or less for all jobs) and (2) seasonal workers (agriculture and forestry, fruit and vegetable cultivation, lumbering, restaurant and hotel businesses, supplemental workers for exhibitions, home helpers, etc.)

France

When a foreign person with a "Temporary Residence Permit (valid for up to one year, includes a work permit)" wishes to work, the Departmental Directorate for Labor, Employment and Vocational Training (DDTEFP: La Direction Départementale du Travail, de l'Emploi et de la Formation Professionnelle) determines the necessity of accepting the foreign worker based on the results of 30-day recruitment activities, the type of job that is applied for, local employment and unemployment conditions, and other criteria.

*Trade 2003.*⁸⁴ The Ministry of Health, Labour and Welfare (2002), "GAIKOKUJIN KOYOU MONDAI KENKYUKAI HOUKOKUSHO"

The overviews of the labor market tests conducted in each country introduced here are based on "GAIKOKUJIN KOYOU MONDAI KENKYUKAI HOUKOKUSHO (Ministry of Health, Labour and Welfare (2002), "OUSHU NI OKERU GAIKOKUJIN ROUDOUSHA UKEIRE SEIDO TO SHAKAI TOUGOU"; Japan Institute for Labour Policy and Training (2006b), and the Website of the Embassy of Canada.

⁸⁶ Arbeitsämter, a part of Bundesanstalt fur Arbeit (Federal Employment Service)

The United Kingdom

A business owner who wishes to employ a foreign worker for a job that requires a work permit advertises the job for four weeks. If it is proven that the job cannot be carried out by a worker from the United Kingdom or the European Economic Area $(EEA)^{87}$, the UK Border Agency of the Home Office issues the work permit. Applicants for professions that require a work permit (valid for a maximum of five years) must meet conditions such as academic qualifications of a bachelor's degree or higher and work experience of three years or more in jobs at Level 3 or higher of National or Scottish Vocational Qualification (N/SVQ)⁸⁸.

The UK Border Agency of the Home Office holds periodical meetings and committees and seeks the opinions from the industrial sector to determine the occupations in which human resources are lacking (construction and bridge engineers, transportation and aviation engineers, physician, nurse, teaching professionals, etc.) and exempt them from the labor market tests.

The United States

The issuance of short-term work visas (H-2A for temporary or seasonal agricultural work and H-2B for temporary nonagricultural work) and immigrant visas based on employment is subject to labor market tests. Prior to filing an application for a residence permit at the Immigration and Naturalization Service of the US Department of Homeland Security, a proof of (1) insufficiency of domestic workers and (2) no risk of adverse effects on the wages and work conditions of domestic workers must be issued by the Department of Labor.

Canada

Employing foreign workers using temporary work visas requires labor market tests. The department of Human Resources and Social Development Canada, must confirm that (1) the job vacancy cannot be filled by Canadians and (2) the wages and work conditions are at the standard level for the occupation and in the region.

(2) Other countries' policies of accepting foreign workers

(Competition for advanced human resources)

The recent trend in developed countries is the "selective acceptance of foreigners," and various approaches have been adopted to actively attract foreign people equipped with advanced skills and knowledge.

⁸⁷ The participants in the EEA include Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom added with Iceland, Liechtenstein and Norway, making a total of 18 countries. The peoples of the participating countries are allowed to stay and work without restriction in other participating countries.

⁸⁸ A public system of job qualifications uniformly applied within the United Kingdom. A job qualification system for recognizing individual skills and knowledge required in specific fields or types of jobs. This covers nearly all types of jobs. The general requirement for "Level 3" is described as the "ability to handle a wide range of various jobs, particularly, with leadership to guide others with responsibility and independence."

First, the United Kingdom, Germany, and France in Europe⁸⁹, are offering incentives such as potential eligibility for permanent residency to promote the entry of human resources having advanced skills and knowledge who contribute to the economy and science in their countries (see Table 2-4-34).

	Advanced human resources	Preferential treatment	Reference
Germany	 Scholars having special expertise Professors or academic supporters in a high position Specialists or business managers earning income that is twice the maximum amount eligible for public sickness insurance and having special work experience International students may remain in Germany for up to one year after their graduation to seek jobs 	 Work permit not required when entering the country Indefinite residency is granted when entering the country and engaging in the specialized field. 	Adopted a system of prioritizing advanced human resources by amendments to the immigration law in 2005
France	 Individuals considered to contribute to the development of France in the economic, intellectual, scientific, cultural, humane, or athletic fields Individuals earning 1.5 times the legal minimum wage (Students) Issuance and renewal of residence permit are simplified if the specialized research in the home country is deemed significant. Foreign students who have earned a master's or higher degree in France are granted a provisional residence permit of up to six months (during this period, they may seek jobs and/or be recruited) 	 Family members can definitely be called into the country. "Temporary residence permit" is valid up to three years (usually one year). 	 The Immigration Law of 2006 enforces the following: (1) control on immigrant inflow, (2) promotion of selective immigration, and (3) reinforcement of social integration Particularly through the "promotion of selective immigration," actively accept foreign persons who will contribute to the economy, science, culture, etc., of France.
U.K.	 Individuals eligible for the point system in the Highly Skilled Migrant Programme (HSMP) (since 2002) Individuals having advanced technical skills and/or knowledge that can be expected to contribute to the growth of the U.K. economy and its productivity (lawyers, music composers, investors, entrepreneurs, and graduate school graduates) (Tier 1 to which the point system has been applied since March 2008) 	 No work permit is necessary (entry is permitted even without a designated employer.) May apply for permanent residency after residing for five consecutive years 	 Announced a five-year plan on immigration control in 2005 The point system is expected to be extended to Tier 2 (individuals with technical skills lacking in the U.K.), Tier 4 (students) and Tier 5 (temporary workers, individuals with a Working Holiday visa, etc.) Application of the point system to Tier 3 (specific low skilled workers) is withheld.

Table 2-4-34 Overview of the systems of accepting skilled human resources in European countries

Sources: Mitsubishi Research Institute, Inc. (2008), OUSHUUSHOKOKU NI OKERU GAIKOKUJINZAI NO KATSUYOU TOU NI KANSURU JITTAICHOUSA and Japan Institute for Labour Policy and Training (2008b), KAIGAIROUDOUJOUHOU: SAIKIN NO OUSHUUIMINSEISAKU NO HENKA TO CHOURYUU

(Adoption of a point-based system in the United Kingdom)

In 2005, the British government announced the introduction of a holistic point system⁹⁰ in 2008 as a new system of accepting foreign workers. The point system integrates more than 80 types of professions that are classified into five Tiers, each of which is assigned a different examination. The points are given based on the academic qualifications, previous annual income, experience and age of the applicant, and the conditions of the UK labor market in the field to be applied for. On February 29, 2008, the point system was adopted for Tier 1 jobs requiring the most advanced skills and knowledge. Tier 1 employees are granted a three-year permit, which may be extended for two years upon renewal. Following a five-year residence in the United Kingdom, they may become eligible to apply for

⁸⁹ In addition to the common experience of these countries such as the connections with colonies before World War II and the acceptance of a large number of foreign workers to cope with the postwar labor shortage, they share more recent experiences such as exposure to the labor movement from the eight Central and Eastern European countries that joined the EU in 2004.

⁹⁰ Similar systems have already been adopted in countries such as Canada and Australia.

permanent residency (see Table 2-4-35)⁹¹. The point system has an advantage that it can respond to the situation of the domestic labor market more flexibly by changing the point distribution every year⁹².

	Eligibility	Remarks
Tier 1	Individuals having advanced technical skills and/or knowledge that can be expected to contribute to the growth of the U.K. economy and its productivity (scientists, entrepreneurs,	 No sponsor is necessary May be changed to Tier 2 or 3 May be eligible for permanent residency
Tier 2	Skilled workers with designated jobs in the U.K. who will reduce the worker shortage in the U.K.'s labor market (nurses, educators,	May be changed to Tier 1 or 3May be eligible for permanent residency
Tier 3	A limited number of unskilled workers (construction workers, etc.) to temporarily supplement the U.K. labor market.	• Temporary eligibility and may be changed to other Tiers
Tier 4	Students	May be changed to Tier 1 or 2
Tier 5	Relocation of young people and temporary workers (workers sent from foreign companies, youth exchange through cultural programs, etc.)	 Permitted to work in the U.K. only for a certain period of time mostly for purposes other than economic development Temporary eligibility and may be changed to other Tiers

Table 2-4-35 Occupation tiers in the U.K. point-based system

Sources: Mitsubishi Research Institute, Inc. (2008) OUBEISHOKOKU NI OKERU GAIKOKUJINZAI NO KATSUYOU TOU NI KANSURU JITTAICHOUSA and Japan Institute for Labour Policy and Training, (2006b) European System of Foreign Workers Immigration and Social Integration





Notes: Plan to be extended to Tiers 2 and 5 in the Fall of 2008 and Tier 4 in the Spring of 2009. Inclusion of Tier 3 is currently under consideration.

 $^{^{91}}$ The point system is to be adopted from Tier 2, Tier 4, and to Tier 5.

 $^{^{92}}$ Some disadvantages considered, on the other hand, are that the verification of the academic degrees and qualifications of the applicants is difficult due to the points determined based on whether there are educational and other qualifications and that assessing the academic degrees and qualifications of different countries as equivalent may pose problems (OECD (2007), "International Migration Outlook").

(A sense of crisis in the EU and efforts made by each country)

In October 2007, the European Commission proposed the "Blue Card Directive" in an attempt to attract skilled human resources into the EU countries⁹³. The idea of the Blue Card system was introduced due to the sense of insufficiency of, in particular, advanced human resources in the EU countries⁹⁴.

In the United States, Australia, and Canada, in which the acquisition of advanced human resources in the EU is seen as a success, the following systems have been adopted to accept skilled human resources (see Table 2-4-36).

	Temporary employment	Immigration
U.S.	 Short-term work visa (H) Intra-company transferee visa (L-1) Business/investment expatriate visa (E-1, E-2) 	Labor immigrants • First priority labor immigrants (EB-1) • Specialist immigrants (EB-2) • Skilled or specialized worker immigrants (EB-3) • Investor immigrants (EB-5), etc.
Australia	 Short-term business visa (3 months or less) Long-term work visa (4 years or less) Working Holiday visa Technical work visa for graduates (foreign students who have completed a curriculum of more than 2 years at a university/college in Australia are able to work in Australia for 18 months 	Technical work immigrants (points system), etc.
Canada	 Work visa Working Holiday visa Work visa program after graduation (foreign students who have completed a curriculum of more than 2 years at a university/college in Canada are able to work in Canada for up to 3 years), etc. 	 Technical work immigrants (points system) Self-employed/independent business owners Entrepreneurs Investors, etc.

Table 2-4-36 Foreign worker acceptance in the U.S., Australia, and Canada

Sources: General Accounting Office (2006), Foreign Workers: Information on Selected Countries' Experiences, JETRO (2005), Cross-border Movement of People, Mitsubishi Research Institute, Inc. (2007), OUBEISHOKOKU NI OKERU GAIKOKUJINZAI NO KATSUYOU TOU NI KANSURU JITTAICHOUSA, National Diet Library (2007), the Problems of the Immigrant Policy and the Foreign Workers Policy in a Depopulation Society, and Website of the Embassy of Canada)

In the United States, working as a non-immigrant⁹⁵ for a certain period of time requires a non-immigrant work visa, and advanced human resources are generally accepted using a specialty

⁹³ According to the Website of the European Parliament, a discussion in the European Council on June 6, 2008 and a review in the European Parliament on October 8, 2008, are planned as the policy process before the proposed Blue Card Directive is establishes as a system.

⁹⁴ The European Commission has stated two factors: (1) that the employment rate of advanced human resources in the region is already high (83.2%), and thus, the recruitment in the region alone is inadequate, and (2) that while the advanced human resources recruited by the EU countries from outside the EU are mere 1.72% of the entire worker population, the percentage of outsourced workers is high in Australia at 9.9%, Canada at 7.3%, and the United States at 3.2% (the EU press release. "MEMO/07/423" October 23, 2007). Franco Frattini, a vice-president (Justice, Freedom and Security) of the European Commission, explained the reason for the proposed Blue Card that "the United States retained more than half of the advanced human resources in the world, whereas the EU has gained only 5%" (*Financial Times*, October 23, 2007).

⁹⁵ Foreign workers are divided into three types: "immigrants" who have been legally granted permanent residency, "non-immigrants" who have been granted temporary residency for a specific purpose, and "illegal immigrants" who have entered the country without immigration inspection or whose residence permit has expired (Ministry of Economy, Trade and Industry (2003), *White Paper on International Economy and Trade 2003*).

occupation visa (H-1B). This visa allows temporary employment in occupations that require specialized skills in construction, engineering, mathematics, physics, medicine and hygiene, education, business administration, accounting, law, and other fields. The breakdown of H-1B visa recipients in 2005 by type of profession reveals that computer-related jobs (43%) and construction and engineering $(12\%)^{96}$ had a large share, implying that foreign workers are actively contributing to the field of science and technology in the United States.

The number of H-1B visas that can be issued per year is generally limited to 65 thousand. High-tech and other industries, however, demanded that more visas be issued to solve their problem of human resource shortage and, in response, the Congress passed, in 2004, the bill that would allow an additional 20 thousand visas per year issued only to those who had earned master's and doctoral degrees in the U.S. Despite this, since all available H-1B visas are still completely distributed early in the fiscal year, there is a strong demand in the United States for a further increase in the number of visas issued⁹⁷.

Meanwhile, Australia and Canada have adopted a point system for accepting immigrants to be granted permanent residency. The points are distributed with a focus on aspects such as academic qualifications, work experience, age, and language (official language) so as to determine the applicability to the labor market of the host country (see Table 2-4-37).

⁹⁶ The US Department of Homeland Security. "Characteristics of Specialty Occupation Workers (H-1B): Fiscal Year 2005"

⁹⁷ Microsoft Corporation has opened a development center in Richmond in Canada, 130 miles north of the company's headquarters (State of Washington), for engineers whose H-1B visa has not been granted. The convenience of promptly moving engineers from the United States when joint work is needed is important to the company (*Business Week*, January 28, 2008).

Australia		Canada		U.K.			
		Qualifying points					
Qualifying points (depending on job types) Runner-up qualification (depending on job types)	100-120 80-120	Qualifying points	67	Qualifying points (total points from education, previous income, domestic work experience and age)	75		
Assessment aspects	Score	Assessment aspects	Score	Assessment aspects	Score		
Job, education	40 - 60	Education	5 – 25	Education	30 - 50		
				Previous income	5 – 45		
Work experience	5 – 10	Domestic work experience	21	Domestic work experience	5		
Listed as a job with worker shortage	15 – 20						
Qualifications in Australia	5 – 25						
Age	15 – 30	Age	10	Age	5 - 20		
English language ability.	15 – 25	Official language	24	English language ability	10		
Sponsorship	25			Financial support	10		
Spouse assessment	5	Adaptability: Place of education in Canada for the spouse, work experience and academic background of the applicant, whether there is a Canadian family	10				
Bonus points	5						
		Already recruited in the country	10				

Table 2-4-37 Overview of point systems in Australia, Canada and the U.K.

Sources: Websites of immigration and relevant agencies of each country

(Competition intensifies also in Asia)

Among the Asian countries, South Korea and Singapore are enthusiastically accepting advanced human resources.

In South Korea, a system of three types of cards called "Gold Card,"⁹⁸ "IT Card," and "Science Card" has been established to facilitate the acquisition of specialized engineers, which provides preferential treatment such as a significant reduction in the time taken for issuing visas.

Singapore, on the other hand, issues an "employment pass" among other work permits for the purpose of collecting foreigners with specialized knowledge and skills. Employment passes are applied for by the workers in person, and are categorized into three types consisting of P1 and P2 Passes designed for experts, executives, managers, etc., and Q Pass for experienced workers with special and technical skills. Each pass is initially valid for two years and subsequently renewable every three years. These passes expire when their employment contracts come to an end (see Table 2-4-38).

⁹⁸ The nationalities of the foreigners who have received a Gold Card include India with the largest share in every year from 2001 to 2007, followed by China, Japan, and Vietnam (Tokio Marine & Nichido Risk Consulting Co., Ltd., (2008), "ASIA SHOKOKU NI OKERU GAIKOKU JINZAI NO KATSUYOUTOU NI KANSURU JITTAI CHOUSA").

	Advanced Human Resources	Preferential Treatment
Republic of Korea	 Gold Card (foreigners with a 2 year experience after earning a bachelor's degree in any of 8 specified science and technology fields or more than 5 years of work experience) IT Card (foreigners with a 2 year work experience after earning a bachelor's degree in the field of development engineering for IT-related technology or more than 5 years of work experience) Science Card (foreigners who have been a researcher for 3 or more years after earning a master's degree in science and technology or have earned a doctorate and been recruited to work in a university or research institution) 	• Significant reduction in the time required for visa issuance
Singapore	 Employment pass (P-Pass and Q-Pass) Individuals for companies or investments (at least 1.5 million Singapore dollars deposited to the Singaporean government) 	• May apply for permanent residency (must be younger than 50 years)

Table 2-4-38 Advanced human resource acceptance in South Korea and Singapore

Sources: Japan Institute for Labour Policy and Training (2007), AJIA NI OKERU

GAIKOKUJINROUDOUSHAUKEIRESEIDO TO JITTAI and Tokio Marine & Nichido Risk Consulting Co., Ltd. (2008), AJIA SHOKOKU NI OKERU GAIKOKUJINZAI NO KATSUDOUTOU NI KANSURU JITTAISHOUSA

(3) Mutual recognition of qualifications that encourage international labor movement

As discussed thus far, each country is providing certain preferential treatment for skilled workers while setting its own criteria for high-level human resources.

Qualifications such as those for engineers, physicians, accountants, and others in various specialized fields are meanwhile certified separately in each country. Such qualifications, therefore, are not recognized in other countries. This hinders the international movement of workers as it prevents qualified workers from obtaining a job in their area of expertise. The mutual recognition of qualifications with other countries could be one of the indicators of the criteria for the permission to enter Japan, which would provide companies with clear indicators in hiring specialized and skilled foreign workers. Subsequently, the following describes relatively advanced systems of mutual certification for engineers.

Mutual recognition agreement for accrediting agencies for industrial technology education (commonly known as the Washington Accord)

In 1989, the United Kingdom, Australia, Canada, Ireland, New Zealand, and the United States mutually recognized that the accreditation criteria and the methods and procedures for the examinations of assessment and accrediting agencies for industrial technology education were substantially equivalent and signed an agreement. As a result, undergraduate engineering curricula in the countries included in the agreement are considered equivalent and the privileges identical to those for the locally certified graduates in the country are granted to engineering graduates certified by assessment and accrediting agencies in the other countries. Subsequently, assessment agencies in Hong Kong (in 1995) and South Africa (in 1999) received approval to join the agreement, and Japan was admitted in 2005 through Japan Accreditation Board for Engineering Education (JABEE).

Certification systems for engineering qualifications shared in regional economic zones

In order to improve the mobility of engineers, certification systems for engineering qualifications that are shared in each regional economic zone of the EU, NAFTA, and APEC have begun to be established.

In the EU member countries, Fédération Européenne d'Associations Nationales d'Ingénieurs (FEANI), a European accrediting agency for engineering qualifications, has initiated an engineering accreditation system called "Euro Engineer (Eur Ing)" that is shared by the member countries for the purpose of enhancing the qualifications of engineers and to promote their mobility⁹⁹. At present, 30 countries including the United Kingdom, France, and Germany are members of FEANI.

In 1995, the engineering councils of the United States, Canada, and Mexico established an inter-regional engineering accreditation system known as "NAFTA Engineer."

In contrast, economic development in the APEC region could be promoted through appropriate technology transfer, which would require the improved mobility of engineers within the region. Consequently, the "APEC Engineer Mutual Recognition Project," aiming to facilitate the movement of qualified engineers in the region, is under way in response to the Osaka Action Agenda adopted by the APEC 1995 Summit. APEC engineers are registered in 11 different fields, and Japan is assigning "engineers" to all qualification fields and "first-class registered architects" and "engineers" to the structural engineering field¹⁰⁰ (see Table 2-4-39).

Country	Japan	U.S.	Australia	South Korea	Singapore	Malaysia	Indonesia	(Euro Engineer program)	U.K.	France	Germany	(Ref.) APEC Engineer
Qualification	Engineer	Professiona 1 Engineer	CPE	PE	PE	PE	PE	European Engineer	Chartered Engineer	Ingenieur Diplome	Diplom Ingenieur	APEC Engineer
Legal basis	Professional Engineer Law	PE Act (state law)	Royal Charter	National Qualification Law	PE Act	Engineer Registration Law		N/A	Royal Charter	Engineer Title Act	Federal and state laws	N/A
Accreditation agency	Ministry of Education, Culture, Sports, Science and Technology	State registration committee	Engineer Association	Department of Labor	Ministry of National Development	Ministry of Works	Indonesian Engineer Association	FEANI registration committee	Royal Engineering Council	Engineer Title Commission	Engineering universities	APEC Engineer Coordinating Committee
# of qualification sectors	21	19	7 sectors (registration)	22	6	26	11		19		22	11
# of qualified people	61,794 (end of FY2007)	414,000 (1995)	33,000	19,500 (1999)	2,900	6,700	4,500	20,000 (1995) (Many are from the U.K.)	200,000	320,000	800,000	Unknown

Table 2-4-39 Overview of engineer qualification systems around the world

Notes: The data for APEC engineers were prepared by the Ministry of Economy, Trade and Industry Sources: Website of the Institution of Professional Engineers, Japan, etc.

⁹⁹ According to "KOUGAKU KYOUIKU PUROGURAMU NINTEI SEIDO NI KANSURU KISO CHOUSA KENKYU HOUKOKUSHO: GENJOU BUNSEKI HEN (August, 1999) issued by Japan International Cooperation Agency (1999), the objectives of Euro Engineer are (1) to ensure that the engineer qualifications in the member countries are recognized not only in Europe but also worldwide, (2) to improve the social status, roles, and responsibility of engineers, and (3) to secure compensation for the specialized work of engineers and build an environment in which engineers can easily move within the area and in countries around the world.¹⁰⁰ The Japan APEC Engineer Monitoring Committee announced on March 27, 2008, that the number of

¹⁰⁰ The Japan APEC Engineer Monitoring Committee announced on March 27, 2008, that the number of engineers who had been recognized as satisfying the requirements of an APEC engineer in the fields of APEC engineers was 2,176 in civil engineering, 434 in structural engineering, 55 in mechanical engineering, 28 in chemical engineering, 49 in electrical engineering, 4 in geotechnical engineering, 23 in environmental engineering, 34 in industrial engineering, 1 in mining engineering, 9 in information engineering, and 2 in bioengineering. http://www.engineer.or.jp/apec/shinsakekka15.html

(4) International student policy emphasized in some countries

As noted in Chapter 2-1, countries such as Switzerland, the United Kingdom, New Zealand, Canada, and the United States host a large number of students from other countries¹⁰¹. These countries with a high percentage of international students also host a significant number of skilled foreign workers, implying that those from other countries accepted as students are employed as advanced human resources in the host country after earning their degrees.

The policies of accepting international students in Australia, New Zealand, and the United States suggest the view of such countries that consider hosting international students as important opportunities for acquiring skilled human resources, in which active efforts to attract such students are often evident¹⁰² (see Table 2-4-40).

¹⁰¹ OECD's definition of an international student is a student who is non-citizens of the country that he/she stays. ¹⁰² The economic effects of international students are also rather considerable. The lastitute of

¹⁰² The economic effects of international students are also rather considerable. The Institute of International Education in the United States that publishes an annual report titled "Open Doors" estimates that the effects of more than 500 thousand international students in the United States amount to 14.5 billion US dollars per year. In Australia, the acceptance of foreign students is considered as an "education and export business," which is promoted as a means to earn foreign currencies. The New Zealand Department of Education encourages the acceptance of foreign students as a factor of economic effects, stating that in 2003, such students contributed more than 2 billion dollars to the country's economy.

Country	# of foreign students accepted in 2005	Key points in foreign student policy	Key countries and regions in the acceptance of foreign students	Placement of foreign students in the labor market and support such as employment service	
Australia	Approx. 210,000	• Active acceptance of foreign students is seen as "education and export industries" and promoted as a means to acquire foreign currencies. "The Endeavour Programme" that includes the creation of a new scholarship to attract high-quality foreign students has been initiated.	 No particular countries and regions are specified; however, an increase in the number of students from the Asia and Pacific region is being promoted. 	 No support for employment is provided. However, many universities hold seminars for foreign students to prepare for their home- return after graduation and provide guidance for employment. A visa that allows foreign students who have completed a curriculum that satisfies certain conditions to remain in the country for employment has been created (September 2007). 	
New Zealand	Approx. 70,000	 Announced a strategic cage in the field of international education in 2004: 1. Education counselors were placed in Beijing and three other cities in 2004 to improve the country's long-term educational partnership with other countries. 2. Scholarships are provided to up to 100 excellent foreign students at each of undergraduate and graduate levels every year by 2007, etc. 	• None	 Just as for domestic students, support is provided by the institution in which each of them are enrolled (sections providing employment services at each university, etc.) 	
U.S.	Approx. 590,000	 United States Education Information Centers are established at 450 locations worldwide and respond to inquiries. Educational exchange visas (J visas) are issued to 280,000 people per year to promote short-term stays under educational exchange programs. In January 2006, 50 presidents from nationwide universities were assembled at an international education summit held by the Department of State to promote the acceptance of international students and researchers in the U.S. through cooperation between the government and universities. 	• No countries and regions are specified	• Nothing in particular	
Canada	Approx. 110,000 (2004)	• Various types of assistance including scholarships are provided by the federal and state governments.	 Many of the international students are from the Asian region, and comprise slightly less than 40% of the international students attending universities (undergraduate and graduate) and approximately 50% of all international students attending all types of educational institutions. 	•Amended in April 2008 so that foreign students who have completed a curriculum that satisfies certain conditions are able to obtain a work permit that lasts up to three years even without employment arrangement	
U.K.	Approx. 390,000	 Announced the "Prime Minister's Initiatives on International Education" in 1999 to actively attract international students. The goal of adding 50,000 students entering higher education institutions was achieved in Phase 1 (2000–2005). Phase 2 began in 2006, which focuses on the improvement of the quality of international students and development and strengthening of the ties with the countries of their origin. The British Council works to advertise the educational programs available in the U.K., provide information on studying in the U.K., etc. 	 First priority countries: China, India, Japan, Brazil, Malaysia, Singapore, Russia, and Hong Kong Second priority countries: Australia, Brunei, Cyprus, Indonesia, Mexico, Pakistan, South Korea, Taiwan, Thailand, Turkey, the U.S., and Vietnam 		
Switzerland	Approx. 40,000	 Facilities for pre-admission preparation courses are placed in Freiburg, in which language training and educational curriculum in preparation for undergraduate studies are provided to international students. 		• Employment consultation for international students provided by universities	

Tab	le 2-4-40	Policies	of major	countries	for	accepting	g int	erna	atior	nal	student	S

Sources: Exchange of Persons Division, Ministry of Foreign Affaits (2004), SHUYOUKOKU CHIIKI NI OKERU RYUUGAKUSEI UKEIRE SEISAKU, Mitsubishi Research Institute, Inc. (2008), OUBEI SHOKOKU NI OKERU GAIKOKU JINZAI NO KATSUYOUTOU NI KANSURU JITTAI CHOUSA, National Diet Library (2007), the Problems of the Immigrant Policy and the Foreign Workers Policy in a Depopulation Society, OECD Educational Database, Website of the Embassy of Canada and media reports.

The competition for skilled human resources intensifies amid the progress of globalization, and, not only developed countries but also some of the Asian countries are announcing their plans to accept more international students. Until 2007, China was carrying out its "five-year strategic plan" to attract 120 thousand students from other countries, and South Korea is aiming to receive 50 thousand international students by 2010¹⁰³. The Singaporean government has adopted a policy to raise the percentage of foreign students in institutions of higher education to approximately 20% and support alliances with superior universities and graduate schools in other countries¹⁰⁴.

(5) Japan's efforts to become the hub of human resources in Asia (Important Asian connection)

Japan's connection with other Asian countries becomes essential for the country to receive advanced human resources and support human resource development in Asia.

Asia, encompassing nearly half of the world's population, represents a major source of the world's human resources, as confirmed in Chapter 2-1. On the other hand, the shortage of human resource is becoming an apparent issue in numerous parts of Asia due to the lack of appropriate educational opportunities.

Many of the foreign workers in specialized and technical fields¹⁰⁵, international students, and foreign trainees and technical interns accepted in Japan are from other Asian countries owing to the geographical proximity. In 2006, 57% of the foreign workers in specialized and technical fields, 82.3% of the college and pre-college students, and 94.6% of the foreign trainees (all new entrants to Japan) were from Asia¹⁰⁶. In particular, the percentage of Asians in the foreign workers in specialized and technical fields increased from 32% in 2000 to 57% in 2006 (see Figure 2-4-41).

While Japan has been strengthening its ties with other Asian countries, as mentioned in Chapter 2-1, skilled human resources in Asia still tend to seek their destinations in the U.S. and European countries. Japan, claiming to accept an increased number of advanced human resources¹⁰⁷, must become a country that appeals to skilled people in Asia and publicize that this system allows a proper and efficient process of entry and employment or training so as to further enhance its relationship with other Asian countries.

¹⁰³ Exchange of Persons Division, Ministry of Foreign Affairs (2004), "SHUYOUKOKU, CHIIKI NI OKERU RYUGAKUSEI UKEIRE SEISAKU", and Jun Woo-hong, Director of the Overseas Korean Education Division, Ministry of Education and Human Resources Development. "Study Korea Project."

¹⁰⁴ Yonezawa, A. and I. Kimura. (2004), "KOUTOU KYOUIKU GUROBARU SHIJOU NO HATTEN: ASIA TAIHEIYOU SHOKOKU NO KOUTOU KYOUIKU SEISAKU KARA ETA SHISA TO ODA NO YAKUWARI." In Singapore, the Economic Development Board (EDB) under the Trade and Industry Department is leading the support activities to invite overseas universities to the country.

¹⁰⁵ For details, read the section titled "Current condition of the acceptance of foreign workers in Japan" in

this report. ¹⁰⁶ The result of subtracting "entertainers" from the specialized and technical workers in the types of resident status and the number of "college students" and the number of new entrants as "trainees" were observed based on their home countries.

¹⁰⁷ Advanced human resources refer to those workers with exceptional knowledge and skills for whom different countries would compete, among the non-Japanese nationals permitted to work in Japan in "specialized and technical fields" based on the Third Basic Plan for Immigration Control (Ministry of Economy, Trade and Industry (2006), White Paper on International Economy and Trade 2006).

The following subsection addresses the current condition and future potential of the Industrial Training and Technical Internship Program constituting the framework for the acceptance of foreign workers, particularly advanced human resources; international students who may become future skilled workers; and international cooperation through technology transfer.



TSUITE (KAKUNENBAN)

(Current condition of the acceptance of foreign workers in Japan)

The previous section explained how some countries have been eagerly working to accept advanced human resources and international students, and Japan's current situation in accepting foreign workers is as follows.

First, foreign workers in Japan can be broadly divided into (1) those in "specialized and technical fields" (the so-called advanced human resources), (2) Japanese descent, (3) technical interns, and (4) college and pre-college students.

Japan has announced its policy to actively accept advanced human resources, in particular, by stating "the acceptance of foreign workers in specialized and technical fields is to be further promoted," according to the "Ninth Basic Employment Measures Plan (approved by the Cabinet on August 13, 1999)."¹⁰⁸ Residence status for the purpose of working by using specialized knowledge and technical skills is classified into 14 types from "professor" to "skilled laborer,"¹⁰⁹ and as of 2006, approximately 180 thousand people had been granted residency (see Tables 2-4-42 and 2-4-43).

¹⁰⁸ "The Basic Policy for Economic and Fiscal Management and Structural Reform 2006" (approved by the Cabinet on July 7, 2006) encourages the improvement of international student programs, youth exchanges between Japan and other Asian countries, and an increase in the acceptance of advanced human resources such as superior foreign researchers and engineers. In addition, in the Council on Economic and Fiscal Policy held on May 9, 2008, a plan to establish a task force under the Chief Cabinet Secretary to increase the expert foreign workers accepted in the country.

¹⁰⁹ The Ministry of Economy, Trade and Industry (2003), *White Paper on International Economy and Trade 2003*.

The number of registered foreigners and new entrants excluding "entertainer" by type of resident status has been gradually increasing in recent years. In particular, the recent increase in the number of new entrants and registered foreigners who fall under the categories of "engineer," "specialist in humanities/international services," and "intra-company transferee" that correspond to one type of advanced human resources commonly called "foreign employees"¹¹⁰ has been exceptional¹¹¹ (see Figure 2-4-44). This is likely a result of the trend in which foreigners living in Japan using such resident status stay longer and are more settled than before and a considerable number of foreigners are permitted to change their status from a "college student," for instance, to one of these types of resident status every year¹¹².

The number of technical interns has also been on the rise in recent years¹¹³.

Category	Specialized/technical fields	Trainees and Technical Interns	Foreign-born Japanese	College and Pre-college Students	Illegal Residents
# of individuals	Approx. 180,000	Approx. 160,000	Approx. 250,000 Long-term residents: Approx. 170,000 Spouse or child of Japanese national: Approx. 80,000	Approx. 170,000 College students: Approx. 130,000, Pre-college student (Japanese language school students, etc.): 40,000	Approx. 170,000
Immigration control	Specialized/technical fields (professors, artists, business managers, researchers, etc.) 14 categories	63 industries & 116 positions e.g., machinery/metals, textile/garment manufacturing, food production, etc.	2nd and 3rd generations of Japanese descendants, e.g., Brazilian Japanese, and their spouses	Foreigners attending higher education (college students) Foreigners attending Japanese language schools, high schools, etc. (pre-college students)	Illegally remaining in the country after entering as a tourist, etc. Disappeared after entering the country for studying or training.
Permission to work	Permitted to work within the range specified for the resident status	May work as an intern in a company offering the opportunity when satisfying certain requirements after training	Permitted to work (no restrictions on the type of jobs)	Part-time work is permitted unless it hinders academic performance (normally, no restrictions on the type of jobs)	

Notes: The data used are of FY2006.

Sources: Ministry of Economy, Trade and Industry, "GAIKOKUJIN ROUDOUSHA MONDAI"

 $^{^{110}}$ Based on the definition by the Immigration Bureau of the Ministry of Justice

¹¹¹ In 2002, the number of new entrants to the country among those commonly called "foreign employees" was 11,810 and that of registered foreigners was 76,136. In 2006, the new entrants amounted to 20,893 and registered foreigners totaled 106,472.

¹¹² The Ministry of Justice (2005), "The Third Basic Plan for Immigration Control"

¹¹³ The number of applicants for the transfer to Technical Internship Program in the Industrial Training and Technical Internship Program increased just as the number of trainees and technical interns, which was 19,225 in 2002 and rose to 51,016 in 2006 (Japan International Training Cooperation Organization, *JITCO White Paper 2007*).

Resident Status	Examples of Jobs/Conditions	Work Restrictions	Term of Residence	
Diplomat	Ambassadors, ministers, consuls general, etc. of foreign governments and their family members	within a certain range	during mission	
Official	Embassy and consulate stuff members etc. of foreign governments and their family members	within a certain range	during mission	
Professor	College/university professor, etc.	within a certain range	3 yrs. or 1 yr.	
Artist	Music composer, painter, writer, etc.	within a certain range	3 yrs. or 1 yr.	
Religious Activities	Missionary sent by a foreign religious group, etc.	within a certain range	3 yrs. or 1 yr.	
Journalist	Reporter of a foreign news agency, photographer, etc.	within a certain range	3 yrs. or 1 yr.	
Investor, Business Manager	Business owner, company manager	within a certain range	3 yrs. or 1 yr.	
Legal/Accounting	Lawyer, CPA, etc.	within a certain range	3 yrs. or 1 yr.	
Medical Services	Physician, dentist, etc.	within a certain range	3 yrs. or 1 yr.	
Researcher	Research for a government agency, company, etc.	within a certain range	3 yrs. or 1 yr.	
Instructor	Language instructor at a high school, secondary school, etc.	within a certain range	3 yrs. or 1 yr.	
Engineer	Engineer specializing in mechanical engineering, data processing technology, etc.	within a certain range	3 yrs. or 1 yr.	
Specialist in Humanities/International Services	Interpreter, designer, language instructor for a company, etc.	within a certain range	3 yrs. or 1 yr.	
Intra-company Transferee	Foreign company's employee relocated to Japan. Jobs are the same as above two categories.	3 yrs. or 1 yr.		
Entertainer	Actor/actress, singer, dancer, professional athlete, etc.	1 yr., 6 mons. or 3 mons.or 15 days		
Skilled Laborer	Licensed cook of non-Japanese cuisine, sport instructor, precious metal worker, etc.	within a certain range	3 yrs. or 1 yr.	
Cultural Activities	Researcher of Japanese culture, etc.	Not permitted to work	1 yr. or 6 mons.	
Temporary Visitor	Tourist, conference participant, etc.	Not permitted to work	90, 30 or 15 days	
College Student	Student at a university, two-year college, vocational school (specialized learning), etc.	Not permitted to work	2 yrs. or 1 yr.	
Pre-college Student	Student at a high school, vocational school (higher or general courses), etc.	Not permitted to work	1 yr. or 6 mons.	
Trainee	Trainee	Not permitted to work	1 yr. or 6 mons.	
Dependent	Spouse or child of a foreigner having any of the types of resident status from "professor" to "cultural activities" or college student listed above	Not permitted to work	3 yrs., 2 yrs, 1 yr, 6 mons. or 3 mons.	
Designated Activities	Domestic worker of a diplomat, etc., foreigner with a Working Holiday visa, technical intern, etc.	within a certain range	5, 4, 3, 2 or 1 yr or 6 mons. as individually specified	
Permanent Resident	Foreigner granted permanent residency by the Minister of Justice	no restrictions	Unlimited	
Spouse of a Japanese national, etc.	Spouse, biological child or adopted child (subject to legal requirements) of a Japanese national	no restrictions	3 yrs. or 1 yr.	
Spouse or Child of Permanent Resident	Spouse or biological child born in Japan who continues to reside in Japan of a permanent resident or "Special Permanent Resident"	3 yrs. or 1 yr.		
Long-term Resident	Indochina refugee, 3rd generation of foreign-born Japanese, etc.	no restrictions 3 yrs. or 1 yr individually sp		

Table 2-4-43 Types of resident status in Japan

Notes: In addition to the above "status of residency" provided for in the Immigration Control and Refugee-Recognition Law, "Special Permanent Residents (those from Korea and Taiwan who have lost Japanese nationality through a peace treaty between Japan and their country and their descendants)" specified in the Special Law on Immigration Control are living in Japan. Sources: Ministry of Economy, Trade and Industry (2003), *White Paper on International Economy and Trade 2003*

foreign workers in specialized/technical fields = 14 types of resident status ranging from "professor" to "skilled laborer"



Figure 2-4-44 Changes in the number of registered foreigners in Japan and the number of new entrants to Japan

(Current condition and issues of Japan in the competition for advanced human resources)

Currently, when countries around the world are fiercely competing for skilled human resources, as confirmed in Chapter 2-1, Japan, in which the demand for such workers is growing particularly high, must accelerate the acceptance of advanced human resources.

Acceptance of advanced human resources lagging behind the international standard in Japan

First, the status of the acceptance of skilled foreign workers in Japan is as follows. The term "advanced human resources" does not necessarily correspond to higher education graduates; due to statistical limitations, however, the following focuses on the number of higher education graduates. OECD statistics indicate that the percentage of international students in domestic higher education graduates is high in the United States at 13.4%, in the United Kingdom at 15.9%, in Germany at 11.4%, in France at 12.4%, etc.; in Japan, however, it is a mere 0.7% (see Figure 2-4-45).

An international comparison of the percentage of higher education graduates in the foreigners residing in major countries shows that despite a certain level of achievement of Japan at 31%, it is still lower than that of Canada, New Zealand, the United States, and Australia, which are actively accepting advanced human resources (see Figure 2-4-46).



Figure 2-4-45 Percentages of foreigners in the population of higher education graduates

Source: OECD, Factbook 2007.



Notes: The figures represent the percentages of higher education graduates in the population of foreign-born people. Source: Çaglar Özden and Maurice Schiff, INTERNATIONAL MIGRATION, Remittances and the Brain Drain

Direction of Japan's efforts for increased acceptance

When considering new measures to further increase the skilled human resources accepted in Japan, there should be considerable significance to study the approaches adopted by the abovementioned countries that are participating in the global competition for skilled human resources. Such approaches include focus on the development of the environment for international students and workers, establishment of systems such as the priority of skilled workers in the extension of their resident status

and emphasis on students from other countries.

There has also been an opinion that improving the treatment of foreign workers represents one of the important factors in attracting advanced human resources into the country.

In this connection, a comparison of the wages in the manufacturing industry in major cities of the world reveals that while Japan is positioned high at the worker (general factory worker) level, it drops to the lowest among developed countries at the middle management level, which is not far from emerging countries such as Singapore and Dubai (see Figure 2-4-47).

Meanwhile, in Japan, there is an urgent demand for skilled human resources in IT, whose wage level is yet lower than those in developed countries such as the United States, the United Kingdom, and Germany and close to those in South Korea and Singapore (see Figure 2-4-48).

In a questionnaire conducted by the Ministry of Economy, Trade and Industry, large companies with more than 1,000 employees stating that Japanese employees alone could not fill all management positions and middle positions comprised 27.8% and 55.7%, respectively¹¹⁴. In Japan, therefore, increasing the compensation, particularly that of the upper-management level, should be important for recruiting superior foreign workers who are capable of taking charge of management.

At present, when numerous countries are fiercely competing for advanced human resources, Japan, too, must promptly develop a more attractive employment and living environment by offering high compensation that is appropriate for their skills and executive positions and core functions in a company so as to increase the advanced human resources coming to work in the country.

As part of the efforts of the government, a "promotion council" consisting of the government, industries, academia, and workers has been established to accelerate the acceptance of skilled workers from around the world, which determines numerical goals and necessary measures. The activities of this council include the development and implementation of action programs of relevant ministries and departments in 2008, an increase in the acceptance of highly skilled foreign researchers, engineers, business managers, etc., facilitation of the use of foreign human resources in the companies in Japan, creation and announcement of "internationalization indicators" to measure the level of internationalization of companies to attract superior workers, and other discussions concerning human resource management.

¹¹⁴ The Ministry of Economy, Trade and Industry. (2007), "GLOBAL JINZAI MANAGEMENT KENKYUKAI HOUKOKUSHO".





Notes: Based on the ten highest and ten lowest countries (20 in all) and in the five highest and five lowest countries in Asia (ten in all) announced by Mercer.

Sources: Mercer "IT Pay around the World Survey 2007 - Country Rankings"

(Current condition and issues of Japan's policy of accepting international students)

As evident from the previous discussion, an increase in skilled human resources from other countries would be facilitated significantly by taking in a large number of foreign students, which has also been demonstrated in the cases of other countries.

The number of international students accepted in Japan reached the goal presented in the "Plan to

Accept 100,000 Foreign Students^{"115} in 2003, and the number exceeded 120 thousand in 2005. Subsequently, in response to then Prime Minister Fukuda's address on his administrative policies made in January 2008, a new "Plan for 300,000 Exchange Students" is to be established and implemented, aiming to reach this goal by 2020.

Current condition of foreign students in Japan

The academic fields in which a large part of foreign students in Japan major in are the humanities and social sciences, and particularly science majors from other countries who compete on a global scale are extremely few in comparison to other major countries (see Figures 2-4-49 and 2-4-50).

After foreign students in Japan graduate from a "college" or "pre-college," only a very small number—approximately a quarter of all foreign graduates—are granted a change of their resident status for the purpose of employment, considering the total number of foreign students graduating in Japan¹¹⁶. In other words, only less than 30% of all foreign students find jobs in Japan. On the contrary, a questionnaire conducted among foreign students in Japan indicates that the largest percentage, approximately 60%, of the respondents selected "working in Japan" as their desired plans after graduation¹¹⁷. This suggests the need for efforts to promote the recruitment of foreign students who wish to remain Japan and find a job or start a business (see Figures and Table 2-4-51 through 2-4-53).

Private businesses, on the other hand, pose an issue in that they are somewhat reluctant to recruit foreign students. A questionnaire shows that only 9.6% of the responding companies have hired non-Japanese graduates as regular or contract employees in the last three years¹¹⁸. The prospects for the future requirement of such students are clearly divided between the companies that have experience in employing non-Japanese graduates and those that have no experience. Among the companies that have experience, 79.5% answered that they "may hire non-Japanese graduates in the future." In contrast, only 19.7% of those without experience are willing to employ such graduates (see Figure 2-4-54).

¹¹⁵ Instructed by then Prime Minister Nakasone in 1983

¹¹⁶ While about 35 thousand graduated (completed the program) in the 2006 academic year, only about 8.2 thousand were granted a change of their resident status (about 9 thousand applied for a change).

¹¹⁷ This is followed by "I wish to further my education in Japan" (Japan Student Services Organization (2006), "HEISEI 17 NENDO SHIHI GAIKOKUJIN RYUGAKUSEI SEIKATSU JITTAI CHOUSA GAIYOU"). The answer selected by the largest number of respondents to a multiple-choice question, "What are your plans after you graduate from the school that you currently attend?" Dividing the answers in the same questionnaire according to their enrollment levels reveals that the largest number of "doctoral students" and "postgraduate research students" wished to find a job in their home countries, whereas the largest number of "graduate students (master's programs)" and "full-time undergraduate students" preferred to be employed in Japan. The answer selected by the largest number of students in other academic programs was to further their education in Japan. ¹¹⁸ The Japan Institute for Labour Policy and Training (2008a), "GAIKOKUJIN RYUGAKUSEI NO

¹¹⁸ The Japan Institute for Labour Policy and Training (2008a), "GAIKOKUJIN RYUGAKUSEI NO SAIYOU NI KANSURU CHOUSA".



Figuer 2-4-49 The number of international students accepted in major countries

Notes: Based on OECD's definition, an "international student" is a student who does not have citizenship in the country that he/she stays. Source: OECD, *Educational Database*.



Figure 2-4-50 Disciplines specialized by international students in Japan

Source: OECD (2007b), "Education at a Glance 2007".



Figure 2-4-51 Desired plans of international students after graduation (by discipline) (persons) Further education or work in Japan = 4,561

Notes: 1. The questionnaire was sent to 5,500 individuals and 4,155 valid responses were returned. Multiple choice questions 2. "Third country" refers to a country other than Japan and their homeland.

Source: Japan Student Services Organization (2006), "HEISEI 17 NENDO SHIHI GAIKOKUJIN RYUUGAKUSEI SEIKATSU JITTAI CHOUSA GAIYOU"



Figure 2-4-52 Number of international students who have been granted a change of resident status for the purpose of employment

Notes: The figures for the "the number of foreign-national graduates" were used for the years that could be confirmed in GAIKOKUJIN RYUUGAKUSEI SHINTOTOU JOUKYOU (courses of international students after graduation) prepared by Japan Student Services Organization

Sources: Immigration Bureau, Ministry of Justice, "HEISEI 18 NENDO NI OKERU RYUUGAKUSEITOU NO KIGYOUTOU ENO SHUUSHOKU NI TUITE" and "RYUUGAKUSEI NI KAKA WARU NYUUKOKU ZAIRYUU NO GENJOU TO KADAI NI TSUITE" ;

Japan Student Services Organization, GAIKOKUJIN RYUUGAKUSEI SHINTOTOU JOUKYOU (2004, 2005, and 2006).

Number of individuals	8,272
Nationality, country/region of origin	China (72.5%), South Korea (11.4%), Taiwan (2.4%), etc.
Educational background	Bachelor's (48.4%), Master's (25.4%), Doctorate (7.7%), etc.
Resident status	"Specialist in Humanities/International Services" (71.8%), "Engineer" (20.8%), etc.
Industry of employment	Non-manufacturing: 71.9% (commerce and trade, computer, and education are ranked high) Manufacturing: 28.1% (machinery and electrical products are ranked high), etc.
Type of job	Translation and interpretation (32.8%), data processing (10.8%), sales and marketing (10.7%), international operations (8.8%), etc.
Number of employees in the employing company	49 or below (42.1%), 50– 99 (9.7%), 100–299 (12.9%)
Location of the employing company	Tokyo (47.1%), Osaka (11.1%), Aichi (6.9%)
Monthly salary	200,000–249,999 yen (43.4%), less than 200,000 yen (27.2%), 250,000–300,000 yen (17.5%)

Table 2-4-53 Employment of international students at Japanese companies and organizations (2006)

Source: Ministry of Justice, "HEISEI 18 NEN NI OKERU RYUUGAKUSEI TOU NO NIPPON KIGYOU TOU ENO SHUUSHOKU NITSUITE".



Figure 2-4-54 Prospect of recruiting international students in the future (depending on whether they have experience)

Source: Japan Institute for Labour Policy and Training (2008a), GAIKOKUJIN RYUUGAKUSEI NO SAIYOU NI KANSURU CHOUSA.

Problems when working in Japan

When foreign students seek employment in Japan, learning the Japanese language becomes an obstacle.

In another questionnaire¹¹⁹ that asked companies about their impression of foreign students, many respondents selected "lack of Japanese language skills" and "low retention rates." The language skills of non-Japanese graduates are considered very important by companies during recruitment. On the other hand, many of the students also point out the challenges they face in learning Japanese as a problem when working in a company in Japan (see Figures 2-4-55 and 2-4-56).

¹¹⁹ The Association for Overseas Technical Scholarship (2007), "HEISEI 18 NENDO KOUZOU HENKA NI TAIOU SHITA KOYOU SYSTEM NI KANSURU CHOUSA KENKYU (NIPPON KIGYOU NI OKERU GAIKOKUJIN RYUGAKUSEI NO SHUGYOU SOKUSHIN NI KANSURU KENKYU"



Figure 2-4-55 Abilities of international students valued by companies in recruitment

Source: The Association for Overseas Technical Scholarship (2007), KOUZOU HENKA NI TAIOU SHITA KOYOU SISUTEMU NI KANSURU CHOUSA KENKYUU (NIPPON KIGYOU NI OKERU GAIKOKUJIN RYUUGAKUSEI NO SHUUGYOU SOKUSHIN NI KANSURU KENKYUU) HOUKOKUSHO



Figure 2-4-56 Challenges in the employment of international students

Source: The Association for Overseas Technical Scholarship (2007), " KOUZOU HENKA NI TAIOU SHITA KOYOU SISUTEMU NI KANSURU CHOUSA KENKYUU (NIPPON KIGYOU NI OKERU GAIKOKUJIN RYUUGAKUSEI NO SHUUGYOU SOKUSHIN NI KANSURU KENKYUU) HOUKOKUSHO"

Direction of Japan's efforts

While the environment for receiving a large number of superior students from other countries has been gradually developed, more efforts including making universities more attractive to foreign students and providing support for their employment must be made¹²⁰.

The government has established and is implementing the new "Plan for 300,000 Exchange Students" that is to be achieved by 2020, thereby encouraging more students to study in Japan.

¹²⁰ Previously, up to 180 days of stay in Japan was permitted after foreign students completed their educational programs. Since March 2006, they have been allowed to remain in the country for up to one year after the completion of their education until they join a company if an employment deal is made during the initial 180 days.

In an attempt to accomplish this goal, approximately 30 high-quality public and private universities (tentatively called "Global 30") that will form a base of Japan's internationalization will be selected across the country to facilitate the efforts toward internationalization in high-priority areas.

In addition, employment support and an environment for accepting international students will be developed. In 2007, for instance, the "Asian Human Resource Fund Initiative" was established to increase the opportunities for outstanding students from Asia to be employed in Japan¹²¹, which will be steadily continued. An alliance of the government, industries, and academia will be formed to provide those qualified foreign students from Asia and other regions who are willing to work in Japan with job-seeking support that is inclusive of specialized education, business Japanese language training, internship, etc., so as to make studying in Japan more appealing to foreigners.

(The significance and potential of the Industrial Training and Technical Internship Program) The significance of the Industrial Training and Technical Internship Program

The objective of the Industrial Training and Technical Internship Program is to assist developing countries in their efforts to "develop human resources" who will lead the country's economic growth through the transfer of technology, skills, and knowledge¹²².

The number of trainees and interns coming to Japan through this program has been increasing every year.

Improvement of the Industrial Training and Technical Internship Program

The Industrial Training and Technical Internship Program has been contributing to the progress of Asian and other countries and regions through human resource development. Some argue that support for the acquisition of such industrial and vocational skills and aptitudes should be enhanced, and the effectiveness of the current program must be improved by providing opportunities to learn more advanced technical skills and creating types of jobs that reflect the actual workplaces so that, considering the actual technological advancement, the trainees and interns are able to fully acquire such skills¹²³. Meanwhile, there have been various problems such as failure to pay training fees or wages in the training and internship¹²⁴, which do not serve the purpose of the program, namely, technology and skill transfer to developing countries, and suggest the need for proper management as the first priority.

The study group for the Industrial Training and Technical Internship Program of the Ministry of Economy, Trade and Industry is proposing the establishment of an "Advanced Technical Internship

¹²¹ The details are described in Chapter 4-5.

¹²² The Ministry of Economy, Trade and Industry (2005), White Paper on International Economy and

*Trade 2005.*¹²³ The Ministry of Economy, Trade and Industry (2007a), A report on the study group for the Industrial Training and Technical Internship Program held in October 2006, which discussed the ways to make the Industrial Training and Technical Internship Program more appropriate and strict and the measures to improve it so that it would be more desirable for both the trainees and companies. The report was published in May 2007.

¹²⁴ The Ministry of Justice "KONGO NO GAIKOKUJIN NO UKEIRE NI KANSURU PUROJEKUTO CHIIMU".

Program (tentative name)" offered to highly skilled and motivated trainees for the purpose of enhancing the current training and internship program and improve the effectiveness of skill transfer¹²⁵. This is a program that provides outstanding and enthusiastic trainees with additional two years of training after the current three years, which offers an opportunity to acquire more sophisticated skills. More specifically, those who have passed a skill examination equivalent to Level 3 of the National Trade Skill Test upon the completion of the three year training will be permitted to re-enter Japan after a certain period of time if they wish in order to learn more advanced technical and managerial skills.

There is also an opinion that the range of jobs covered by the training and internship program should also be reconsidered¹²⁶. At present, this program covers 63 types of jobs in seven fields primarily in the manufacturing industry. Considering the progress of technical skills demanded and the trend of a shift to a service-oriented economy, however, some are of the view that the program should be expanded to include multi-skilled workers capable of handling more diverse processes and other industries and occupations such as services and distribution¹²⁷.

The issues concerning the Industrial Training and Technical Internship Program have been discussed by the Council of Regulatory Reform, the Ministry of Health, Labour and Welfare, the labor market research group of the Council on Economic and Fiscal Policy, Nippon Keidanren, Japanese Trade Union Confederation (Rengo), and other groups, and the future developments will draw further attention (see Table 2-4-57).

¹²⁵ The Ministry of Economy, Trade and Industry (2007c), *White Paper on International Economy and Trade*.

¹²⁶ The Council on Economic and Fiscal Policy (2007), "ROUDOU SHIJOU KAIKAKU SENMON CHOUSAKAI DAI NIJI HOUKOKU," etc.

¹²⁷ The Committee on Labor Market Reform of the Council on Economic and Fiscal Policy has concluded that it is important to transfer skills and use a wide range of abilities that foreigners may offer in the areas of nursing, care-giving, domestic work, and childcare, for which the demand is expected to grow in the future with the as further decline in the birthrate and aging of the population.



[Column 18] The foreigner acceptance systems of Singapore and South Korea

Like Japan, Singapore and South Korea are Asian neighbors that face the problem of a declining birthrate and an aging population, and the following subsections briefly describe their systems of accepting foreigners. The systems of accepting foreign workers followed by these countries are designed to prevent the unrestricted inflow of foreigners into their labor markets.

Responding to the declining birthrate and an aging population 1: The case of Singapore

Singapore has began accepting foreign workers based on work permits to which certain restrictions apply¹²⁸.

Examples of restrictions on the acceptance of unskilled foreign workers requiring work permits are "Dependency Ceiling" and "Foreign Worker Levy." These two restrictions prevent the excessive flow of foreign workers into Singapore. The Dependency Ceiling sets the highest percentage of foreign workers out of all employees or determines the number of foreign workers who can be employed per Singaporean employee. This regulation limits the number of foreign workers who can be employed by each business. The Foreign Worker Levy is the obligation of an employer to pay a certain amount for each foreign worker he/she employs (see Column Table 18-1).

¹²⁸ Singapore was separated and became independent from Malaysia in 1965. Partly due to this background, the government has firmly maintained its policy to eliminate the reliance on foreign workers as much as possible and, until the mid-1970s, adopted only a short-term work permit of up to one-year that was available only to Malaysian workers. In the late 1970s, however, Singapore's economic growth resulted in labor shortage and the policy of accepting only Malaysians was no longer adequate; thus, the country began to accept more foreign workers, to which certain restrictions would apply.

Sector			Levy Rate in S\$	
	Dependency Ceiling	Category of Foreign Worker	Monthly	Daily
Manufacturing	Un to 400% of the total months and	Skilled	150	
	Up to 40% of the total workforce	Unskilled	240	
		Skilled	150	
	MOADOVE 40% to 55% of the total workforce	Unskilled	280	
		Skilled	450	15
	Above 55% to 65% of the total workforce	Unskilled	450	
	1 local full-time worker to 7 foreign workers	Skilled	150	
Construction		Comes from NTS or China and is experienced, thus exempted from MYE	300	
		Unskilled	470	
	1 local full-time worker to 5 foreign workers	Skilled	150	
Marine		Unskilled	295	
		Skilled	150	
Process	1 local full-time worker to 7 foreign workers	Comes from NTS or China and is experienced, thus exempted from MYE	300	
		Unskilled	300	
		Skilled	150	
Services	Up to 30% of the total workforce	Unskilled	240	
	Above 30% to 40% of the total workforce	Skilled	200	10
		Unskilled	280	
	Above 40% to 50% of the total workforce	Skilled	450	15
		Unskilled	450	
	27/4	Normal rate	265	
Jomestic worker	N/A	Concessionary rate	170	
S Pass Holder	25% of the total workforce	Skilled	50	

Notes: 1. When employing a foreign worker for domestic work, a preferential employment tax rate applies to households with a child(ren) and/or grandchild(ren) aged 12 or younger and/or old person(s) aged 65 or older.

2. NTS (non-traditional sources) represent seven supplying countries of India, Sri Lanka, Thailand, Bangladesh, Myanmar, the Philippines and Pakistan.

3. MYE (man-year entitlements) refers to foreigner employment quota according the types and scales of projects such as construction (specifying the limit of the employment of foreign workers).

Source: The Website of the Ministry of Manpower of the government of Singapore



Singapore also grants foreign workers eligibility for "permanent residency" when specific conditions are met¹²⁹. Permanent residency eliminates the need for a Pass (work permit) and allows the status holder to remain in the country even when his/her employment is terminated. Besides the eligibility based on kinship such as spouses and elderly parents of Singapore nationals, permanent residency may be available to (1) employment pass or S Pass holders who are younger than 50 years of age and have been recognized as having the expertise needed in Singapore, (2) artists and athletes who are deemed worthy of permanent status by the government, and (3) individuals who have deposited 1.5 million Singapore dollars to the Singaporean government. In Singapore, more than 60% of the international students are reportedly granted permanent residency or citizenship of Singapore after graduation¹³⁰.

Responding to the declining birthrate and an aging population 2: The case of Republic of Korea

In South Korea, the "Employment Permit System" was adopted in 2004 in place of the former foreigner training program¹³¹, which became an object of public concern later because of its unfair labor practices such as low wages, long-term labor, and human right violation.

The "Employment Permit System" allows unskilled workers to be accepted based on the memoranda signed with eight countries¹³² that will send workers; the principles of this system are as follows (1) to complement the domestic labor market, (2) to guarantee the rights of workers, and (3) to prevent the long-term stay of foreign workers¹³³. Simultaneously with the establishment of the "Employment Permit System," a large number of illegal residents in South Korea (amounting to 289 thousand people, comprising 80% of the total number of foreign workers) were accepted as foreign workers, i.e., they were "normalized." The employment permit is valid for up to three years, and, in order to prevent the prolonged stay of foreigners, re-entry and employment after more than one year of absence from the country are permitted¹³⁴, however, family members are not allowed to accompany the workers.

 ¹²⁹ Singapore's permanent residency holders totaled 440.5 thousand in 2005, representing 10.1% of the total population (291 thousand in 2000).
 ¹³⁰ Japan Institute for Labour Policy and Training (2007), "ASIA NI OKERU GAIKOKUJIN

¹³⁰ Japan Institute for Labour Policy and Training (2007), "ASIA NI OKERU GAIKOKUJIN ROUDOUSHA NO UKEIRE SEIDO TO JITTAI".

¹³¹ The "trainee program for overseas investment companies" that was adopted in 1991 for the purpose of training the overseas factory workers of South Korean companies that had advanced abroad in the parent companies in South Korea and assigning them to the local factories again. This was available mostly to large companies. The training period was up to two years and some companies had restrictions on the number of trainees. The "Foreigner Industrial Training Program," on the other hand, allowed small- and medium-sized companies to accept trainees from 1993.

¹³² The South Korean government has designated 15 countries from which workers would be accepted: the Philippines, Thailand, Mongolia, Sri Lanka, Vietnam, Indonesia, Uzbekistan, Pakistan, Cambodia, China, Bangladesh, Kyrgyzstan, Nepal, Myanmar, and East Timor. Memoranda had been signed with these countries by June 2008 (Tokio Marine & Nichido Risk Consulting Co., Ltd., (2008), "ASIA SHOKOKU NI OKERU GAIKOKU JINZAI NO KATSUYOUTOU NI KANSURU JITTAI CHOUSA").

¹³³ Sun, W. (2007), "KANKOKU NO IJU GAIKOKUJIN TO GAIKOKUJIN SEISAKU NO SHITENKAI".

¹³⁴ The period from departure to re-entry was initially one year so as to prevent foreign workers from staying permanently in South Korea; however, at present, it is six months. Further, re-employment at the same establishment requires at least a one-month absence between the departure and re-entry.

In 2008, foreign workers satisfying the following conditions have been granted eligibility to change their status to "residency"¹³⁵: (1) a holder of resident status within the framework of the Employment Permit System who has been working for more than five years in the last ten years, (2) a holder of specified expertise or skill qualifications or an individual earning total annual wages in excess of the average annual wages of South Koreans (more than 29 million won based on the June 2007 average), (3) an individual whose total assets are worth 20 million won or more, (4) a holder of Korean language ability equivalent to or higher than Level 3 of the Korean Proficiency Test, and (5) an individual with no criminal record¹³⁶.

On April 30, 2008, after the start of the Lee Myung-bak administration, the Committee for National Competitiveness announced its policy to partially permit "dual nationality," by which an individual holds nationalities of South Korea and another country, in an attempt to prevent the outflow of superior human resources from the country and attract excellent workers from outside¹³⁷. At the same time, the government has announced its plans to establish a "Contact Korea" center in 25 overseas offices of KOTRA (Korea Trade-Investment Promotion Agency), expand the eligibility for permanent residency visas, and make other attempts to recruit qualified human resources¹³⁸.

[Column 19] Globalization and corporate human resources The current situation of US companies

The globalization of US companies has resulted in diversified nationalities of their CEOs. The media reports¹³⁹ that, among the top 100 companies listed in Fortune "500 Largest US Corporations (2007 edition)", companies with foreign CEOs totaled nine in 1996 but increased to 15 by 2007. While the nationalities of the foreigner CEOs were mostly Canadian and European in 1996, foreigner CEOs, in 2007, come from various countries including India, Egypt, and Morocco (see Column Table 19-1).

¹³⁵ South Korea conventionally granted eligibility to apply for "permanent residency" to holders of "residency" status, which is one of the types of resident status, for five years. Some foreign workers who satisfy the conditions, therefore, have been offered an opportunity for "permanent residency."

¹³⁶ Sun, W. (2008), "KANKOKU NO 'GAIKOKUJINRYOKU' UKEIRE SEISAKU (forthcoming)" (original source: Ministry of Justice, Republic of South Korea). One of the reasons why the policy grants foreign workers the possibility of "permanent residency" is the shortage of skilled workers in South Korea.

¹³⁷ Public hearings will be held from now and subject to the condition of support from public opinions, proposed amendments to related-laws will be prepared in November 2008 and submitted to the National Assembly (JoongAng Ilbo, May 1, 2008). According to the editorial in JoongAng Ilbo, South Korea's nationality law is strict, and South Koreans automatically lose their South Korean nationality if they acquire a foreign nationality, and conversely, if foreigners acquire South Korean nationality, they are demanded to submit written proof of surrendering their original nationality within six months. The number of people who acquired South Korean nationality in the last ten years was 50 thousand; meanwhile, the number of those surrendering their South Korean nationality has reached 170 thousand.

¹³⁸ Sun, W. (2008), "KANKOKU NO 'GAIKOKUJINRYOKU' UKEIRE SEISAKU (forthcoming)" (original source: Ministry of Justice, Republic of South Korea). The decision of the Committee for National Competitiveness was partly intended for the recruitment of foreign workers with specialized skills.

¹³⁹ Story (2007). "Globalization comes to US executive suite." The data on the foreign CEOs of the US companies in the following has been derived from this.

Column Table 19-1 Foreign CEOs in the U.S. Fortune 100 companies				
Fortune ranking	Company	CEO's home country		
4	Chevron	Ireland		
8	Citigroup	India		
10	American International Group	U.K.		
19	Cardinal Health	Canada		
23	Altria Group	Egypt		
40	Dow Chemical	Australia		
63	PepsiCo	India		
70	Ingram Micro	Canada		
71	Alcoa	Morocco		
73	Northrop Grumman	Canada		
82	Hartford Financial Services	India		
88	News Corporation	Australia		
94	Coca-Cola	Northern Ireland		
95	Liberty Mutual Insurance Group	Ireland		
97	3M.	U.K.		

Note: The home countries of CEOs in the table are true as of December 13, 2007. Source: *International Herald Tribune*, December 13, 2007

For instance, Vikram Pandit, who replaced the former CEO of the largest US bank, Citigroup, Charles Prince—who resigned from the position to take responsibility for the losses incurred from the subprime mortgage loans—is from India.

The diversification of the nationalities of foreigner CEOs is likely to reflect the trend of relocating the base of business growth to overseas markets. In fact, the overseas sales of S&P 500 components have been increasing every year, and those for overseas markets are estimated to exceed half in 2008. Furthermore, some point out that an increasing number of US business managers build their careers outside the United States as the companies' boards of directors demand overseas experience of the management teams.

Meanwhile, the media reports that boards of directors are not always capable of exploiting the potential of foreigner executives.¹⁴⁰ Of the 30 Dow components, the directors of 9 companies (30%) are all Americans. Of the directors of the 30 companies, on the other hand, 40 are foreigners and comprise approximately 11% of the total. Many of them come from the United Kingdom or Mexico (eight each), and few are from BRICs that are seen by companies as markets.

¹⁴⁰ Holstein "International Intelligence." The data on the foreign directors of the US companies in the following have been derived from this.

The current situations of companies in Japan

In Japan, too, some companies are beginning to assign foreigners to managerial positions based on the idea of "the right person in the right place."¹⁴¹ The Nikkei 225 components include a total of six foreigner presidents and CEOs (including scheduled presidents/CEOs) (see Column Table 19-2).

Amid the declining birthrate and an aging population, it is crucial to develop an environment in which competent human resources, irrespective of nationalities, can be retained and developed and whose potential can be fully exploited in order for Japanese companies to strengthen and maintain their competitiveness.

On the grounds of such recognition, the Ministry of Economy, Trade and Industry has decided to consider creating and announcing the indicators of internationalization to facilitate the objective understanding of global human resource management and provide incentives for further internationalization.

Company	President, CEO, Chairman, etc.		
Nikkei 225 components			
Nippon Sheet Glass	President, Stuart John Chambers		
Sony	CEO, Howard Stringer		
Nissan Motor	CEO, Carlos Ghosn		
Softbank	CEO, Masayoshi Son		
Shinsei Bank	CEO, Thierry Porte		
Trend Micro	CEO, Chen Yi-Fen Chairman, Chan Ming-Jang		
Other major listed companies			
SSP Co., Ltd.	Chairman, Thomas Heil		
TonenGeneral Sekiyu	Chairman, D. G. Wascom		
BP Castrol	President, Charles Postles		
D&M Holdings	CEO, Eric C Evans President, Victor J Pacor		
Colombia Music	Chairman, H Strauss Zelnick		
	Chairman, Ho Wing On		
Sansui Electric	Vice Chairman, Ma Chi Chiu		
Sansui Electric Aozora Bank	Vice Chairman, Ma Chi Chiu CEO, Federico J Sacasa		
Sansui Electric Aozora Bank Tokyo Star Bank	Vice Chairman, Ma Chi Chiu CEO, Federico J Sacasa CEO, I Todd Budge		

Column	Table	19-2 Ma	ior listed	companies	with non-	-Japanese to	n manager
Column	raute	1) 2 IVIA	joi noteu	companies	with non	Jupunese top	Jinanager

¹⁴¹ April 2008, Nippon Sheet Glass announced its HR decision to promote Stuart Chambers from the company's UK subsidiary, Pilkington, where he was the president; this announcement drew considerable attention. Then president, Katsuji Fujimoto, commented, "Nippon Sheet Glass is no longer a company focusing only on Japan. It's not surprising that we have a leader with a lot of overseas experience" (Nihon Keizai Shimbun, April 24, 2008).

Active use of advanced foreign human resources

An increasing number of people in Japan are also of the view that "a non-Japanese CEO is needed for management reform."¹⁴² A comparison of Japanese and non-Japanese managers reveals ten attributes of non-Japanese managers that are considered better than those of their counterparts, which include "career positions," "reform and innovation skills," "conceptualization skills," "decisiveness," "strategy development skills," and "originality."¹⁴³

As demonstrated thus far, the motivation for accepting a wide range of foreigners including managers has been increasing, and companies in Japan should start developing the environment for the internationalization of human resources such as making clear career paths.

3. Logistics policy aiming to take in the vitality of Asia

Enhancing the industrial competitiveness of Japan to achieve stable economic growth requires the country to strengthen its international competitiveness through the advancement and diversification of its logistics systems. Particularly in recent years, the relocation of companies' facilities for production, distribution, sales, and other operations to other parts of Asia has been rapidly increasing, and developing the environment in various ways to enhance distribution infrastructure and services proves important in order to exploit the overseas growth taking place in large parts of Asia.

This section reviews the situation of Japan's ports and airports amid the changes occurring to the world's distribution structure and considers the issues in international logistics that Japan should address in an attempt to gain a larger share of the global market.

(1) Changes in the distribution structure of Asia and the situation of Japan

(Changes in the marine distribution structure of Asia and the seaports of Japan)

Declining functions of Japan's seaports as hubs for marine logistics

The changes in the world's container cargo volumes by region illustrate that the largest growth in volumes has been in Asia, which has increased approximately sevenfold in the last 15 years (see Figure 2-4-58). China, in particular, has achieved a remarkable increase in its cargo volume; in fact, in 2005, the country traded 88.55 million TEU containers, i.e., 23.1% of the total port container volume of the world (382.62 million TEU) (see Table 2-4-59).

¹⁴² Japan Management Association (2003), preliminary report on the results of "DAI 6 KAI SHINNIN TORISHIMARIYAKU NO SUGAO NI KANSURU CHOUSA" (August 4, 2003). This survey was conducted among 1,043 new directors of publicly traded companies who were appointed between January and June 2003. The effective respondents were 210.
¹⁴³ The respondents were asked whether Japanese managers or non-Japanese managers were superior in 14

¹⁴⁵ The respondents were asked whether Japanese managers or non-Japanese managers were superior in 14 attributes: "conceptualization skills," "strategy development skills," "management skills," "network skills," "creativity," "originality," "decisiveness," "reform and innovation skills," "negotiation skills," "education," "personality," "hands-on experience," "career positions," and "information literacy." Japanese managers were considered better by many in the following four attributes: "hands-on experience," "management skills," "personality," and "education."



Figure 2-4-58 Changes in container cargo volume by region

Original source: the National Magazine Co. Ltd., Containerisation International Yearbook (annual issues)

Rank	Country	Volume (1000 TEU)	Share
1	China (incl. Hong Kon	88,548	23.1%
2	U.S.	38,519	10.1%
3	Singapore	23,192	6.1%
4	Japan	16,777	4.4%
5	Republic of Korea	15,113	3.9%
6	Germany	13,507	3.5%
7	Taiwan	12,791	3.3%
8	Malaysia	12,027	3.1%
9	Italy	9,855	2.6%
10	U.A.E.	9,846	2.6%
	Total of 10 countries	240,175	62.8%
	Total of the world	382,622	100%

Table 2-4-59 Country ranking of container volumes (2005)

Note: The colored cells represent Asian countries Source: the National Magazine Co. Ltd., Containerisation International

Meanwhile, Japan's container volume has approximately doubled in the last 15 years, showing a slower increase than in other Asian countries. Also, the fact that the container volumes of ports in East Asia have been high indicate that only Japanese ports have been ranked lower while other ports in Asia have been rapidly raising their container volumes (see Table 2-4-60).

Marine distribution has not only simply expanded, but its structure has been shifting to the "hub-and-spoke" distribution model¹⁴⁴ as mentioned in Section 1, and this change has also been taking place in Asia. A comparison of transshipment rates¹⁴⁵ at major ports in Asia in 2003 indicates

¹⁴⁴ The "hub-and-spoke" distribution model refers to a system of collecting cargo at one location (the hub) and dispersing it to different locations (the spokes). This has the benefit of improved transportation efficiency when compared to two-way transportation between locations (point to point). Capital expenditure can also be improved by concentrating the logistics functions at the hub.

A transshipment rate indicates the share of cargo transferred from one mode of transportation to another out of all cargo at one logistics base. The larger the volume of cargo that passes the base, the higher the transshipment rate.
high rates at Tanjung Perapas in Malaysia (95.5%), Singapore (81.0%), Kluang in Malaysia (53.3%), and Pusan in South Korea (41.3%). The transshipment rate of Japan as a whole, in contrast, was a mere 3.8%, suggesting the substantially weak functioning of Japanese ports as hubs when compared to those of other major ports in Asia (see Figure 2-4-61).

Feet	1975			1985			1995		
Asia	World ranking	Port	Volume	World ranking	Port	Volume	World ranking	Port	Volume
1	3	Kobe	905	3	Hong Kong	2,289	1	Hong Kong	12,550
2	4	Hong Kong	802	4	Kaohsiung	1,901	2	Singapore	10,800
3	13	Tokyo	359	5	Kobe	1,852	3	Kaohsiung	5,232
4	15	Yokohama	329	6	Singapore	1,699	5	Pusan	4,503
5	21	Jīlóng	246	9	Yokohama	1,327	8	Yokohama	2,757
6	24	Kaohsiung	225	11	Jīlóng	1,158	12	Tokyo	2,177
7	28	Singapore	192	12	Pusan	1,148	13	Jilong	2,170
8	37	Nagoya	134	14	Tokyo	1,004	16	Manila	1,688
9	38	Osaka	133	24	Manila	505	19	Shanghai	1,527
10	44	Manila	95	34	Osaka	423	22	Nagoya	1,477

Figure 2-4-60 Changes in the top 10 container ports in East Asia

	(Unit: 1,000TEU					
	World ranking	Port	Volume			
	1	Singapore	23,192			
	2	Hong Kong	22,427			
	3	Shanghai	18,084			
	4	Shenzhen	16,197			
	5	Pusan	11,843			
	6	Kaohsiung	9,471			
	13	Qingdao	6,307			
	14	Port Kelang	5,544			
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	15	Ningbo	5,208			
10000	16	Tianjin	4,801			
	22	Tokyo	3,593			
•	27	Yokohama	2,873			
	34	Nagoya	2,491			
	39	Kobe	2,262			

Note: The colored cells represent container ports in Japan. Source: the National Magazine Co. Ltd, Containerisation International Yearbook (annual issue).



Sources: R. Shibasaki, T. Watanabe, T. Kadono, and Y. Kannami, "Estimation Methodology and Results on International Maritime Container OD Cargo Volume Mainly Focused on East Asian Area", *Research Report of NILM No.25*.

Such relative decline in the hub functions of ports in Japan is also reflected in the rise of overseas transshipment rates (the percentage of incoming and outgoing cargoes in Japan that stop in a third country). All destinations have been experiencing considerable growth rates in recent years as is evident in the overseas transshipment rates by destination¹⁴⁶ (see Figure 2-4-62).

¹⁴⁶According to Kojima H., M. Abe, T. Watanabe, and R. Shibasaki (2006), "An Examination of Route



Note: Overseas transshipment rate = transshipped cargo volume / (direct cargo volume + transshipped cargo volume) Source: Ministry of Land, Infrastructure, Transport and Tourism, "Nationwide International Import/Export Container Cargo Survey".

The change in the rate of visiting Japan on the container route between East Asia and North America, which is one of the three largest global liner routes¹⁴⁷, reveals a decrease from 89% in 1988 to 49% in 2004¹⁴⁸. The exclusion of Japanese ports from the major course signifies that cargoes from Japan are first collected at a hub port in another Asian country before being transported to Europe and United States, which may constitute a factor that increases the distribution costs incurred by Japan. As demonstrated by this, the hub functions of Japanese ports are likely to be weakening.

Comparison of port infrastructure in Asia

The growing presence of Asian countries in marine distribution has resulted from the expansion of port infrastructure in Asian countries. In this section, the conditions of such port infrastructure in Asia are compared. It looks at both the hard and soft aspects.

First, in relation to soft infrastructure, an international comparison of the fees per 40-foot container at three ports—the Port of Tokyo, the Port of Kaohsiung in Taiwan, and the Port of Pusan in South Korea—show the fees at the Port of Tokyo are approximately 30% higher than those in the other two ports, suggesting a drawback for Tokyo in terms of cost¹⁴⁹. A consideration of the hard infrastructure illustrates the high standard of the port facilities and their maintenance in Asian countries. For instance,

Choice of International Maritime Container Cargo" (Technical Note of National Institute for Land and Infrastructure Management, No. 283, March 2006, National Institute for Land and Infrastructure Management, the Ministry of Land, Infrastructure, Transport and Tourism), when observing individual ports in Japan, the overseas transshipment rate is growing higher at many of the ports, suggesting an overall trend of "spoke" systems being developed at these ports.¹⁴⁷ The "three largest routes" refer to the North American route (between Asia and North America), the

¹⁴⁷ The "three largest routes" refer to the North American route (between Asia and North America), the European route (between Asia and Europe), and the Atlantic route (between North America and Europe). ¹⁴⁸ The number of stopovers has actually increased from 135 services per month in 1988 to 162 services

¹⁴⁶ The number of stopovers has actually increased from 135 services per month in 1988 to 162 services per month in 2004. However, the number of services that do not stop increased from 16 per month to 172 per month.

¹⁴⁹ In "ASIA GATEWAY KOUSOU NO JITSUGEN NI MUKETA KONGO NO KOUWAN (AN)" by the Ports and Harbors Bureau of the Ministry of Land, Infrastructure, Transport and Tourism, the total costs, combining vessel-related costs, loading and unloading costs, and terminal costs, are compared.

the number of 16-meter deep berths currently used in Japan is strikingly smaller than that in the ports of China and Singapore. Further, due partly to the inadequate development of roads capable of supporting the transportation of containers larger than 40 feet, the super-sizing of container vessels has been somewhat lagging behind (see Figure 2-4-63).

Figure 2-4-63 Development of container terminals in Asian countries



Notes: 1. Data for domestic ports provided by the Ports and Harbors Bureau of the Ministry of Land, Infrastructure, Transport and Tourism (as of May 2008) Data for overseas ports provided by the Ports and Harbors Bureau of the Ministry of Land, Infrastructure, Transport and Tourism (as of March 2007)

2. Of the container terminals being planned with a water depth of 15 - 16 meters, those where future development is expected are included. 3. Container terminals whose water depth is less than 16 meters may be included.

Source: Ministry of Land, Infrastructure, Transport and Tourism

[Column 20] Efforts of Asian countries in seaport development

The improvement in the capacities and scales of seaports in Asia has been supported by the active efforts of each country to enhance their port functions. This column briefly introduces the activities to strengthen the port functions in major Asian countries.

Port of Singapore

The Port of Singapore surpassed Hong Kong in container volume in 2005 to rank first in the world for the first time in seven years. This is the largest transshipment port in East Asia¹⁵⁰. Further expansion is being planned at present, which will increase the number of berths from the current 43 to 52.

¹⁵⁰ However, when a new container terminal opened in Malaysia in 2000, the container volume temporarily decreased, which threatened its position as a transshipment port. This fear was overcome by dropping the loading and unloading fees through terminal business management based on joint ventures with shipping companies and other efforts.

Ports of China¹⁵¹

The container volumes in 2005 show that eight of the world's 30 highest-ranking ports (including Hong Kong) are located in China, and the year-on-year growth in container volume was double-digit at seven ports (excluding Hong Kong).

Among the rapidly growing ports of China, the Port of Shanghai is the most outstanding. It is an river port located at the mouth of the Yangtze River, which caused constant concerns about insufficient water depth. The Government of China consequently began planning the construction of a deep-water port at offshore Yangshan, which has been in use since 2005. The construction of the Yangshan deep-water port is a large-scale project scheduled to be completed in 2025, when the total berth length will be 18 kilometers and the total number of berths will be 52. This will allow 25 million TEU per annum to be handled at the Yangshan port alone¹⁵².

Along with the port of Shanghai, there are expansion plans for the other major ports in China such as port of Shenzhen, Qingdao, Tianjin and Ningbo. As for Hong Kong, the position in container volume was overtaken by Singapore in 2005 for the first time in seven years, it remains the second largest port in the world for reasons such as the frequency of large container vessels using it on major routes and the high efficiency of the port facilities.

Ports of South Korea

China and South Korea signed a maritime agreement in 1992 and liner services between them began in 1993. This allowed China's import and export freight that had been using the Port of Kobe as a hub to move to the Port of Pusan, which offered geographical proximity and lower cost. In January 1995, the Great Hanshin and Awaji Earthquake occurred and accelerated the movement from the Port of Kobe to the Port of Pusan as a substitute.

By 2000, 32.2% of all container cargo handled at the Port of Pusan were connecting containers¹⁵³, surpassing Kaohsiung in Taiwan in container volume ranking to become the third largest in the world. Pusan, however, is faced with the problem of overcrowding and inadequate infrastructure caused by concentration at this import and export port. Consequently, there are plans to disperse the port functions to new ports in Pusan and Gwangyang that are to be constructed. There are also plans to construct large-scale logistics parks behind the terminals of the new ports in an attempt to increase the import and export cargoes through industrial agglomeration. In addition, South Korea is expecting to see an increase in the in-transit cargo to Vladivostok in Russia and other ports and is planning to become the hub port of Northeast Asia.

¹⁵¹ Investment by foreign companies increased in China in the second half of the 1990s due to the country's "open investment policy" for companies from developed countries. This resulted in a dramatic increase in container cargo, causing a full-scale construction rush of port and other facilities to begin.

¹⁵² The total container volume in Japan in 2006 was 16.77 million TEU.

¹⁵³ Connecting container cargo refers to cargo that is transferred from a specific route to another route or distributed to surrounding areas from the connecting port terminal using small boats.

(Changes in the air logistics structure of Asia and the airports of Japan) Increasing importance of air logistics

Air transportation offers the benefit of fast delivery, and although its weight-based share is a mere 0.3% (in FY2005) and far below the share of marine distribution, the share in terms of monetary value is approximately 30%. The importance of airfreight is further growing due to an increase in the transportation of highly value-added goods¹⁵⁴. This is also reflected in the volume of international air cargo in Japan that has increased approximately 3.2 times in the last two decades (see Figure 2-4-64).



Infrastructure, Transport and Tourism, REKINENN NENDOBETSU KUUKOU KANRI JOUKYOU CHOUSHO.

Air transportation plays a significant role in supplying parts with a minimal time lag when Japanese companies build a supply chain that covers the Asian region. In fact, the relationship between the price per unit of weight and dependence on air cargo depicts a trend that the higher the unit price the greater the dependence. This is a reflection of a tendency that the higher the value added to the freight, the more likely that airways are used for transportation (see Table 2-4-65).

¹⁵⁴ Japan Federation of Freight Industries (2007), *SUUJI DE MIRU BUTSURYU 2007*.

Export unit price in 2006	Air freight	Import unit pric	
(yen/kg)	Average	Standard range	(yen/kg
30,000 yen and above	85.4	62.6 - 100.0	30,000 yen and
10,000 – 29,999 yen	60.8	35.2 - 86.4	10,000 - 29,999
5,000 – 9,999 yen	41.0	15.3 - 66.6	5,000 - 9,999
3,000 – 4,999 yen	25.1	4.0 - 46.2	3,000 - 4,999
2,000 – 2,999 yen	14.4	0 - 29.5	2,000 - 2,999
1,000 – 1,999 yen	11.2	0 - 24.6	1,000 – 1,999
500 – 999 yen	7.3	0 – 16.6	500 – 999 yer
200 – 499 yen	3.9	0 - 10.5	200 – 499 yer
Less than 200 yen	1.5	0 - 7.5	Less than 200

Figure 2-4-65 Ratios of weight unit prices and air-freight exports, and weight unit prices and air-freight Ratios of weight unit prices and air-freight exports Ratios of weight unit prices and air-freight imports

Import unit price in 2006	Air freight dependence (%)			
(yen/kg)	Average	Standard range		
30,000 yen and above	93.4	78.0-100.0		
10,000 - 29,999 yen	75.1	52.1 - 98.1		
5,000 – 9,999 yen	51.7	27.3 - 76.2		
3,000 – 4,999 yen	36.4	12.2 - 60.6		
2,000 – 2,999 yen	28.9	6.1 - 51.6		
1,000 – 1,999 yen	18.6	0.8 - 36.4		
500 – 999 yen	10.3	0 - 25.0		
200 – 499 yen	4.8	0 - 14.5		
Less than 200 yen	15	0 - 69		

Notes: The "standard range" refers to the range of values of average air cargo export ratios of the goods included in the corresponding price range +/- standard deviation

Source: Nagata, M., "NIPPON NO KOUKUU KAMOTSU BOUEK", International Trade and Investment, Quarterly Spring 2008 No.71.

Subsequently, observation of the composition of the goods imported and exported by air reveals that capital goods comprise 80% of exports and 60% of imports. This implies that air transportation represents a particularly important means of distribution for Japanese companies that are competitive in highly value-added parts and capital goods in the East Asian production network (see Figure 2-4-66).



Increasing volume of air cargo in Asia and declining relative position of Japan's airports

An increase in the intermediate goods trade triggered by an expansion of the East Asian production network has resulted in the current air transportation cargo volume in the Asia Pacific region being the largest in the world¹⁵⁵. Air cargo volume by airport shows that airports in Asia rank high in the world; five of the ten airports ranked highest in air cargo volume in 2006 are located in Asia¹⁵⁶.

International cargo volume by airline in 2006 also indicates that five of the top ten are from Asia¹⁵⁷.

As is evident from this, airports and airline companies in Asia have firmly established their positions in air logistics; the relative positions of Japan's airports and airlines, however, have been gradually declining. According to a comparison of air cargo volumes at airports in Asia, the volume of international air cargo handled at Narita International Airport was surpassed by that of Seoul Incheon International Airport in 2006, which ranked third in Asia.

Comparison of airport infrastructure in Asia

As in the case of seaports, the expansion of air transportation in Asian countries has been supported by the development of airport infrastructure on a large scale.

Countries in Asia have been building large airports equipped with multiple runways. China, for example, has been building the three large hub airports of North, Central and South China, i.e., Beijing Capital International Airport, Shanghai Pudong International Airport, and Guangzhou Baiyun International Airport, and in Thailand, too, Suvarnabhumi International Airport was opened in September 2006.

In contrast, Narita International Airport in Japan is smaller than other airports in Asia in both the length and number of runways. The airport does not operate between 23.00 and 6.00 while 24-hour operation is an increasing trend among airports around the world (see Table 2-4-67).

Furthermore, there are problems with the accessibility of Narita airport. The passengers on international flights arriving at 6.00, just when the airport opens, will be caught in traffic congestion on the way to the city of Tokyo. Under such circumstances, the growth of airports in Japan is more sluggish than that of other airports in Asia in terms of not only the cargo volume, but the number of passengers (see Table 2-4-68).

 ¹⁵⁵ The air cargo volume in the Asia Pacific region exceeded that in the North American region in 1990 and that in the European region in 1993 to continue a rapid growth.
¹⁵⁶ According to the Website of Airports Council International, the air cargo volume ranking by airport in

¹⁵⁰ According to the Website of Airports Council International, the air cargo volume ranking by airport in 2006 indicates that Chek Lap Kok International Airport, Hong Kong ranked the second in the world, Incheon International Airport, Seoul ranked the fourth, Narita International Airport was the fifth, Shanghai Pudong International Airport was the sixth, and Changi International Airport, Singapore was the tenth.

¹⁵⁷ According to the Website of IATA (International Air Transport Association), the international cargo volume ranking by airline in 2006 indicates that Korean Air ranked first in the world, Singapore Airlines ranked third, Cathay Pacific Airways was the fourth, China Airlines was the sixth, and Eva Air was the ninth. No airlines from Japan ranked in the top ten.

	Runways		A :	and One and	# of	Annual transportation volume (2005)				r	Distance	Acces	c	
Airport	Kully	vays	area	t Operat- ing	departures	# of passengers (in 0,000)			Cargo volume (1000 ton)			urban	Access	
	Current	Future plans	(ha)	hours	(in 0,000 times)	Interna- tional	Domes- tic	Total	Interna- tional	Domes- tic	Total	Tokyo (Km)	Railroad	High- way
Narita International Airport (Japan)	4,000 m ×1 & 2,180 m × 1	Extend from 2,180 to 2,500 m	940	6:00 – 23:00	189.5	27,048	1,124	31,451	2,232.7	7.2	2,239.9	66	O (60 mins)	0
Tokyo International Airport (Japan)	3,000 m × 2 & 2,500 m × 1	Add 2,500 m × 1	1,271	24 hrs.	309.1	1,154	62,144	63,304	0.8	671.7	672.4	20	0 (16 mins)	0
Osaka/Kansai International Airport (Japan)	4,000 m × 1 & 3,500 m × 1		1,055	24 hrs.	110.7	10,513	5,069	16,302	799.2	41.1	840.2	50	O (50 mins)	0
Nagoya/Central Japan International Airport (Japan)	3,500 m × 1		471	24 hrs.	92.0	4,197	6,340	10,764	189.8	36.1	236.5	35	O (28 mins)	
Seoul/Incheon International Airport (Republic of Korea)	3,750 m × 2	Overall plan: 4,000 m × 4	1,174	24 hrs.	163.6	25,591	461	26,223	2,120.0	0.5	2,120.5	50	0	0
Taipei/Taoyuan International Airport (Taiwan)	3,660 m × 1 & 3,350 m × 1	Add 3,850 m × 1	1,223	24 hrs.	152.6	19,213	0	21,701	1,692.4	0.0	1,692.4	40	Under construc- tion	0
Hong Kong/Chek Lap Kok International Airport (Hong Kong)	3,800 m × 2		1,255	24 hrs.	273.4	39,800	0	40,270	3,402.2	0.0	3,433.3	34	O (24 mins)	0
Beijing/Capital International Airport (China)	3,800 m × 2 & 3,200 m × 1		1,199	24 hrs.	341.7	9,399	31,605	41,004	253.4	528.6	782.1	25	Under construc- tion	0
Shanghai/Pudong International Airport (China)	4,000 m ×1; 3,800 m ×1 & 3,400 m × 1	Overall plan: 4,000 m × 3 & 3,400 m × 1	3,200	24 hrs.	205.0	14,555	8,987	23,720	1,601.8	240.7	1,842.5	30	O linear motor	0
Guangzhou/Baiyun International Airport (China)	3,800 m × 1 & 3,600 m × 1	Add 3,800 m × 2 & 3,600 m × 1	1,460	24 hrs.	211.3	3,168	20,231	23,558	172.5	553.8	726.4	26	Under construc- tion	0
Manila/Ninoy Aquino International Airport (Philippines)	3,737 m × 1 & 2,258 m × 1		631	24 hrs.	171.3	9,222	6,972	16,216	296.1	116.1	412.2	8		
Bangkok/Suvarnabhu mi Airport (Thailand)	4,000 m × 1 & 3,700 m × 1	Overall plan: 4 runways	3,200	24 hrs.	285.4	26,821	10,341	38,985	1,071.4	58.9	1,130.3	25	Under construc- tion	0
Kuala Lumpur/Sepang International Airport (Malaysia)	4,000 m × 2	Overall plan: 5 runways	10,000	24 hrs.	182.5	14,338	8,389	23,214	589.8	63.9	653.7	50	O (28 mins)	0
Singapore/Changi International Airport (Singapore)	4,000 m × 2	Add 4,000 m × 1	1,300	24 hrs.	208.3	30,720	No data	32,431	1,833.7	No data	1,833.7	20	0 (27 mins)	0
Jakarta/ Soekarno- Hatta International Airport (Indonesia)	3,660 m × 1 & 3,600 m × 1		1,800	24 hrs.	241.8	5,799	20,674	27,947	159.1	177.0	336.1	20		

Table 2-4-67 International Comparison of Airport Infrastracture

Sources: Kansai Airport Research institute, Airport Handbook 2007 and Websites of each airport

2006								
World ranking	Asian ranking	Airport	Number of passengers	Year-on-year growth (%)				
4	1	Tokyo International Airport (Haneda)	65,810,672	4.0				
9	2	Beijing Capital International Airport	48,654,770	18.7				
14	3	Hong Kong Chek Lap Kok International Airport	43,857,908	8.9				
16	4	Bangkok Suvarnabhumi Airport	42,799,532	9.8				
22	5	Singapore Changi International Airport	35,033,083	8.0				
23	6	Narita International Airport	34,975,225	11.3				

	2007 (premimilarly report)						
World ranking	Asian ranking	Airport	Number of passengers	Year-on-year growth (%)			
4	1	Tokyo International Airport (Haneda)	66,671,435	1.3			
9	2	Beijing Capital International Airport	53,736,923	9.4			
15	3	Hong Kong Chek Lap Kok International Airport	46,995,000	7.2			
18	4	Bangkok Suvarnabhumi Airport	41,210,081	3.7			
19	5	Singapore Changi International Airport	36,701,556	4.8			
24	6	Narita International Airport	35,530,035	1.6			

2007 (preliminary report)

Table 2-4-68 Changes in the number of passengers at international airports in Asia

Source: Airports Council International Website

(2) Issues in the strengthening of the international competitiveness of Japan's airports and seaports

The previous section described the relative decline of Japan's position in the area of international logistics, in which Asian countries play a leading role. In this situation, the Council for Asian Gateway Initiative¹⁵⁸ prepared "the Asian Gateway Initiative" in May 2007, which provides "Ten Major Policy Priorities" that include a "change in aviation policy to achieve 'Asian Open Skies'" and the "implementation of a program for streamlining trade measures," and initiated efforts to improve the international competitiveness of Japan's logistics bases.

The following considers the issues to be addressed in an effort to strengthen the international competitiveness of Japan's logistics bases.

(Promotion of aviation liberalization (Asian Open Skies))

The expansion of international air logistics around the world including Asia has been facilitated by the global trend of a shift from the system of regulating air routes between two countries based on a bilateral government agreement to the so-called aviation liberalization that permits, as a rule, free entry of airline companies to airports if a bilateral agreement on aviation liberalization is signed.

Japan plans to promote the liberalization of aviation based on the Asian Gateway Initiative that will abolish the restrictions on the airport locations and the number of flights that airlines operate, except for the metropolitan airport routes with limited airport capacity.

Based on this, Japan reached an agreement with South Korea in August 2007 on aviation liberalization that will mutually abolish restrictions on the locations and the number of flights to be operated, excluding the metropolitan airport routes. Subsequently, agreements on the liberalization of aviation similar to that with South Korea were made with Thailand in November 2007, Macau and Hong Kong in January 2008 and Vietnam in May 2008. Discussions with the Philippines and other Southeast Asian countries are planned to be held so as to achieve liberalization, and concrete

¹⁵⁸ A council established in October 2006 with then-Prime Minister Shinzo Abe as the chairman.

negotiations with other Asian countries are also being planned. A range of issues also exist in the relationships with countries in Europe and United States, and negotiations for liberalization will be initiated after determining the trends in these regions.

As for the regional airports in Japan, the country's policy to permit airlines to enter the regional airports provisionally even before reaching an agreement in the negotiations for liberalization was announced to foreign airline companies in November 2007.

(Further internationalization and 24-hour operation of Haneda Airport, a metropolitan international airport)

As a step toward the internationalization of Haneda Airport, charter flights to and from Shanghai Hongqiao International Airport began operating on September 29, 2007 (the 35th anniversary of the normalization of Sino-Japanese diplomatic relations), providing four flights a day¹⁵⁹. Also in June 2007, airline companies were notified that international passenger charter flights would be allowed to use the airport during designated hours (departures between 20:30 and 23:00 and arrivals between 6:00 and 8:30). A total of 166 charter flights from Japan Airlines, All Nippon Airways and other airlines have been in operation since July 27, 2007 (as at the end of May 2008).

(Promotion of internationalization of regional airports)

Vitalization of regional airports brings about not only an increase in tourists, but a variety of economic effects including the formation of industrial clusters, employment created by those industries and convenience for companies advancing into overseas markets. Both the number of passengers and the volume of cargo handled at regional airports have been increasing in recent years, suggesting a more active international flow of people and goods at regional airports.

However, while some regional airports operate international charter flights to and from other parts of Asia and have established open networks, their domestic operation is confronted by net losses due to the recent soaring fuel prices, forcing some airlines out of business. In addition, because the market share of domestic airlines in the market for regular international flights using the 23 regional airports is only 2%, the vitalization of regional airports is expected to encourage the participation of domestic airlines simultaneously.

¹⁵⁹ At the minister meeting and top-level meeting between China and Japan held in December 2007, the charter service between Haneda (Tokyo) and Beijing Nanyuan Airport was brought up and the parties agreed on further discussions between relevant Editorities. Urgent discussions were held so that temporary international charter flights connecting Haneda and Beijing Capital International Airport would be available during the Beijing Olympics, and arrangements with China have been continuing for the initiation of the Haneda–Beijing Nanyuan Charter service (the 12th Council on Economic and Fiscal Policy 2008, report submitted by Mr. Fuyushiba, Interim Diet Member).

[Column 21] Efforts of other countries towards aviation liberalization (Open Skies, etc.)

The United States is active in establishing Open Skies agreements. Since the enactment of the Airline Deregulation Act of 1978, the United States has been promoting the entry of domestic airlines and the liberalization of airfare pricing. In 1992, the first Open Skies agreement was signed with the Netherlands to achieve bilateral aviation liberalization¹⁶⁰. The parties to the agreement have increased since then, and by June 2008, the United States had signed the agreement with 92 countries.

Aviation liberalization has also been increasing in Asia. ASEAN countries reached an agreement on the promotion of aviation liberalization policy at the ASEAN Summit in 1995 and are aiming to liberalize both passenger and cargo flights in the region by 2015¹⁶¹. Bilateral international efforts to further liberalize aviation services have been gradually increasing. Since 1997, the United States has signed bilateral Open Skies agreements with ASEAN countries such as Singapore, Malaysia and Brunei and also with South Korea in 1998. In addition, the country has already reached agreement with China that most of the restrictions on air cargo will be lifted by 2011.



(Implementation of a program for streamlining trade measures)

¹⁶⁰ The United States and the Netherlands signed an "open market agreement" in 1978. This agreement provided for "setting competitive airfares," "lifting transportation restrictions," "assigning multiple airline companies," and "making the United States a gateway" to liberalize aviation between the two countries partially. Signing of this open market agreement allowed the entry of multiple US airline companies into the routes between the United States and Amsterdam and helped Schiphol Airport in the Netherlands build its position as a hub airport for the whole of Europe. In addition, in September 1992, the United States and the Netherlands signed the world's first "Open Skies Agreement." This agreement facilitated "deregulation of airfares" and "code sharing." The route deregulation with the United States resulted in the transformation of Schiphol Airport into a hub airport for US routes from the whole of Europe. Even at present, the number of international flight passengers at Schiphol Airport is the fourth largest in the world. In 2002, the ASEAN member countries signed a memorandum that would allow designated airline

companies of the member countries to transport cargo of less than 100 tons a week freely. Subsequently in 2007, the memorandum was revised and the limit was increased to 250 tons.

The conditions relevant to Japan's international trade procedures¹⁶² are beginning to change significantly as a consequence of the progress of computerization and the enhancement of security control¹⁶³. A global trend in customs clearance, for instance, is to simplify and accelerate the process for the cargo of superior businesses that excel in legal compliance so as to ensure safety and achieve fast and efficient distribution.

Taking into account such trends in the world, the Asian Gateway Initiative has developed the "Trade Procedure Reform Program" to reconsider the goals and directions of the country as a whole and to present the basic ideas and specific activities for the purpose of changing Japan's complex and inefficient procedures in international trade to a simple and efficient process that is internationally acceptable. The overview of this program is as follows:

Various regulations have been reviewed for development under the "Trade Procedure Reform Program."

[Overview of the Trade Procedure Reform Program]

1. Revising the regulations and standardizing and simplifying the procedures

Late-night and early-morning availability of the ports

The fees for overtime operation to serve the businesses excelling in legal compliance will be reviewed and the use of the Special Structural Reform Zone System, intensive trials for a limited period of time, and other activities in response to local needs will be implemented in FY 2007.

Standardizing and simplifying the port procedures

The goals of the government will be set for the first time in order to achieve superior convenience that will allow the initial data entry to accommodate multiple stopovers at different ports ("Urgent Response" in FY2007: The government established a standardized model, an electronic application system will begin in October 2009, and the "intensive reform period" is to run for three years until FY2009, which are mostly achieved.)

Wide area cooperation for port administration

Integrated and strategic management of super hub ports, in which the port fees and other burdens will be reduced when cargo stops at multiple ports, will be implemented (during FY2007).

Simplifying and accelerating the procedures for the issuance of certificates of origin based on the Economic Partnership Agreement

¹⁶² Customs clearance, quarantine, port procedures, etc.

¹⁶³ Developed countries have been working harder for better port security. Since the 9.11 terrorist attacks, the United States has been adopting various initiatives for safe ports, and the introduction of the "10+2 Rules" that require container cargo bound for the United States to submit advance information based on the SAFE Port Act is under consideration. Furthermore, a law requiring 100% inspections of container cargo bound for the United States by July 2012 has been enacted. Also in the EU, the so-called 24-hour Rule that requires the submission of information on cargo bound for the EU 24 hours prior to the loading at export ports is scheduled to be enacted in July 2009.

Active and steady improvement will be made to establish a "convenient" system and management of the issuance of certificates of origin based on the Economic Partnership Agreement, including an improved assessment system and simpler application. The possibility of adopting a self-certification system will be actively considered while coordinating activities with relevant government agencies and industries.

2. Promotion of AEO program¹⁶⁴

The use of the AEO program and the support for the adoption of the system in other Asian countries will be further increased, and intergovernmental talks for mutual recognition among the EU, the U.S., and Asian countries will be accelerated (The United States and Japan have agreed on the creation of a study group).

3. Review of the "Next-generation Single Window"¹⁶⁵

Continuous review of the "Next-generation Single Window"

The "Next-generation Single Window (Common Portal)" planned to start operating in October 2008 will be added with airport-related functions within FY2009, and will be continuously reviewed for improvement.

Facilitating the connection to the port system

The original procedures required by each port administrator will be standardized and their formats will be simplified and taken into the "Next-generation Single Window (Common Portal)" to allow electronic application through the government's port EDI system.

Achieving international system collaboration

Negotiations will be started for cross-linking Japan's Single Window and the ASEAN Single Window in 2012 when it is expected to be completed. Efforts will also be made for system collaboration with countries and regions other than the ASEAN members such as the United States, the EU, Republic of Korea, and China.

¹⁶⁴ "AEO" stands for Authorized Economic Operator and is a system of granting privileges such as simplified customs procedures to importers and exporters who have been recognized as conducting adequate cargo security management and legal compliance. The World Customs Organization (WCO) has adopted international guidelines on this in June 2006.

The United States adopted C-TPAT (Customs-Trade Partnership Against Terrorism) in 2003 as a measure against terrorism. Business owners who wish to participate in C-TPAT assess their own supply chain security according to the guidelines and obtain a participation permit. Those business owners who have been approved are entitled to benefits such as a reduced number of inspections by customs. The AEO program was also adopted by the EU in January 2008 and is becoming an international standard system.

¹⁶⁵ Single Window refers to a system that allows the applications and reports for different government offices to be submitted using a single electronic application form and to receive one-time approval for all applications. Japan's "Next-generation Single Window (Common Portal)" is in preparation and aims to start in October 2008.

Consideration of system integration between NACCS and the systems of relevant government agencies

NACCS (Nippon Automated Cargo Clearance System), the key information system for customs clearance, quarantine, and port-related procedures, and the port EDI will be integrated in October 2008. The NACCS Center that operates NACCS is planned to be dissolved and its organizational form will be changed to an incorporated company, which is expected to improve efficiency of the operations through corporate management and to increase convenience by creating new operations such as international system collaboration. For this reason, Nippon Automated Cargo and Port Consolidated System, Inc. is planned to be founded on October 1, 2008.

4. Future follow-ups

Taking the opinions of the private sector into account, the entire government will engage in the revision of the program from a cross-departmental perspective as a priority issue of the Cabinet. Related departments will use the framework of the "Partnership for International Logistics Competitiveness", prepare a progress report at the latest by the end of FY2009, and prepare for program revisions.

Following the establishment of the Trade Procedure Reform Program, various trade-related procedures are currently put on review as described below.

Revising the regulations and standardizing and simplifying the procedures

The number of users (authorized exporters) of the Authorized Exporters' Program¹⁶⁶ has dramatically increased, and the export value has been growing so fast that the goal of a 50% increase set by the public and private sectors appears achievable. The customs system of overtime operation fees was entirely abolished in April 2008¹⁶⁷. A "Study Group on the Standardization and Simplification of Port Procedures" consisting of relevant government departments and organizations was established in July 2007 to address the late-night port procedures and it exchanged opinions about the activities required for standardizing and simplifying the port procedures. In August 2007, the government informed the port administrators that a standardized model containing the items whose data is entered through procedures shared by different ports was useful and requested them to adopt the model. Other measures have also been taken to achieve the goals within the intensive reform period between 2007 and 2009. As for the wide area cooperation of the port administration, the ports in Osaka Bay (including the Port of Osaka, Amagasaki-Nishinomiya-Ashiya Port and the Port of Kobe) were unified into one port in December 2007¹⁶⁸. In an effort to simplify and accelerate the

¹⁶⁶ The Authorized Exporters' Program allows an authorized exporter, (i.e., an exporter who has been approved in advance by any of the customs directors as having an adequate security management and legal compliance system in place) to submit an export declaration to the customs director who has jurisdiction over the place at which the cargo is placed or the port (airport) at which the cargo is scheduled to be loaded and to receive an export permit without carrying the cargo into the bonded area.

¹⁶⁷ Field tests for what is practically a 24-hour delivery service were conducted at the Port of Kobe for three months to promote the late-night and early-morning use of the ports.

¹⁶⁸ In Western Japan, the "International Logistics Strategy Team" consisting of people from industry, the

procedures for the issuance of certificates of origin based on the Economic Partnership Agreement, the maximum period for product assessment (one year) has been removed and a "Study Group on the Reform of the System of Certificates of Origin" consisting of relevant government departments and organizations was established in August 2007. This is used as a place for exchanging opinions with industry and certificate issuing institutions.

Development of the AEO program

A "Public-Private Council on AEO Promotion" consisting of relevant government departments and organizations was established in June 2007, and customs agents, shipping companies, airline companies, freight forwarders and other trade-related businesses were added to importers, exporters and warehouse operators so that the entire supply chain would be covered by the AEO program, taking into account the opinions and requests of private businesses. Following the agreement with New Zealand on cross-certification signed in May, talks on cross-certification with the United States and EU have been held, and mutual learning of systems and programs with Australia, China, Republic of Korea and other Asia Pacific countries that are currently developing their AEO programs have been carried out.

Review of the "Next-generation Single Window (Common Portal)"

In addition to the integration of NACCS and the port EDI, coordination with the systems of other related government departments, the establishment of Nippon Automated Cargo and Port Consolidated System, Inc., and other forms of international system collaboration will be considered. Also, efforts to strengthen the ties with the Single Window of each ASEAN country in view of cross-connection with ASEAN Single Window¹⁶⁹ are being made and discussions on system collaboration with countries other than ASEAN countries have been held.

(Seaport and airport infrastructure development)

Asian countries have been continuing to build seaport and airport infrastructure, and Japan, too, must work to expand its port and other infrastructure, in addition to the implementation of the Asian

government and academia prepared the "Proposal for the strengthening of international competitiveness through wide area cooperation" in March 2006 and has been working towards the materialization of comprehensive cooperation measures, including the unification of the ports in Osaka Bay into a single port that would contribute to the reduction of port entry fees, tonnage dues and special tonnage dues. In response, the Enforcement Ordinance of the Port Regulations was amended on December 1, 2007, resulting in the unification of the Port of Osaka, Amagasaki-Nishinomiya-Ashiya Port, the Port of Kobe and the surrounding areas into the Port of Hanshin.¹⁶⁹ ASEAN Single Window aims to improve the efficiency and reduce the time required for trade within

¹⁰⁹ ASEAN Single Window aims to improve the efficiency and reduce the time required for trade within the ASEAN region by linking the national Single Window of each member country and promoting the standardization, sharing, and digitization of trade-related documents, including customs procedures. This allows applications and reports for different government offices to be submitted using a single electronic application form and enables them to receive one-time approval for all applications, so that data submission and processing and assessment for import and export customs clearance can be centralized. In response to the agreement reached in the ASEAN Summit held in December 2005, the six developed members are aiming to complete their national Single Window by 2008 and adopt the system, including CLMV (Cambodia, Laos, Myanmar and Vietnam), by 2012.

Gateway Initiative, in order for the country's international distribution networks to achieve relatively greater presence in Asia.

As regards seaports, Keihin Port, Nagoya Port, Yokkaichi Port, the Port of Osaka and the Port of Kobe have been designated as super hub ports¹⁷⁰ based on the Port and Harbor Law, and are where the next-generation advanced container terminals with 16-meter deep berths are being constructed. Such efforts are aimed at reducing 30% of the port usage costs and one day of the lead time by FY2010^{171,172.} Meanwhile, improving the coordination from the ships to cargo trains, road transportation, coastal shipping and other modes of transportation is also important for creating powerful and seamless logistics networks that connect inside and outside the country. This includes, for instance, setting up the facilities for container transshipment from ships to cargo trains and improving the road networks to raise the access rate from major ports to highway interchanges to the level of the United States and Europe in the next decade.

Concerning the airports, the parallel runways (2,180 meters) of Narita International Airport are planned to be extended to 2,500 meters at the end of FY2009 and Haneda Airport is planned to be expanded again in 2010. Additionally on May 20, 2008, the 12th Council on Economic and Fiscal Policy 2008 agreed on a policy to utilize the enlarged runway access for the metropolitan airport fully at the beginning of the service in 2010 and to maximize the international airport functions¹⁷³. While this will not change the differentiation between Narita serving international flights and Haneda serving domestic flights, the goal to integrate the use of Narita and Haneda as metropolitan airports and achieve the 24-hour operation of the international airport functions was presented. Narita International Airport continues to enhance its strengths as Japan's largest international airport accommodating numerous networks with countries around the world, and plans to implement measures to upgrade its functions as an international logistics center will be established through the improvement of accessibility to the airport. Papers on use of the cargo areas have also been presented.¹⁷⁴

¹⁷⁰ Specially designated ports are those ports that are designated by a government ordinance as being particularly important as a center of international sea transportation network. There are currently 23 specially designated ports across Japan. Specially designated ports that are particularly important for international container transportation are designated as super hub ports (specifically designated important ports).

ports).¹⁷¹ According to the Customs and Tariff Bureau of the Ministry of Finance (FY2006 survey) the lead-time of Japan's ports (the time from container loading to the point when the cargo becomes available to the recipient) is 2.1 days. According to the Ports and Harbors Bureau of the Ministry of Land, Infrastructure, Transport and Tourism (FY2000 survey), the port cost is approximately 20 thousand yen per 40-foot container.

¹⁷² The plan also calls for the concentration of advanced logistics facilities in the areas adjacent to the container terminal at super hub ports, improvement of the collaboration with the container terminals and promotion of the formation of a "coastal area logistics base" that functions together with these facilities.

¹⁷³ More specifically, the total number of regular international arrivals and departures will be increased to approximately 80 thousand flights (60 thousand at Haneda and 20 thousand at Narita), and Haneda will have flights to Beijing, Taipei, Hong Kong and other cities in addition to Seoul and Shanghai during the day to establish short-distance Asian business routes. Also, approximately 30 thousand flights will be added for late-night and early-morning operation when Narita is closed due to the problem of noise pollution, and regular international services that include flights to Europe and United States will also be operated.

¹⁷⁴ According to the economic effects of the re-expansion construction of Haneda Airport estimated by the Ministry of Land, Infrastructure, Transport and Tourism (published in 2002), the logistics center is not only

At Kansai International Airport, which can be operated 24 hours a day since the opening of the second runway on August 2, 2007, improvement of the logistics functions to fully utilize both runways is important.

[Column 22] The nearly 150 year-old Port of Yokohama and the importance of a "port" that nurtures industries and communities

Ports and harbors in Japan are faced with fierce competition triggered by the rapid growth in major ports of Asia. The transshipment rates of major domestic ports have fallen sharply, and Singapore, Hong Kong, and other major ports in Asia have transformed themselves into hub ports while the rates of direct shipment from Japan have also been declining.

Amid such circumstances, the Port of Yokohama, one of the principal ports in Japan besides the Ports of Tokyo and Kobe, will have its 150th anniversary in 2009, for which a number of events are scheduled. The Port of Yokohama is confronted by intense competition coming not only from other major domestic ports but those in other Asian countries and is attempting to maintain its presence by developing the state-of-the-art Minami Honmoku Pier equipped with very deep and advanced berths that will accommodate the increase in foreign container cargo and the enlargement of container vessels. In fact, the changes in the transshipment rates of container cargo at the Ports of Yokohama and Kobe illustrate a substantial decline at Kobe, partially reflecting the damage from the earthquake, while Yokohama has been sustaining a certain level, which implies the port has been retaining its hub functions (see Column Figure 22-1).

The Port of Yokohama with its long history not only has the necessary port infrastructure, but also has nurtured local industries, towns and communities. Yokohama City is currently the second most populated city of Japan with 1.54 million residents (estimation as of April 2008), and its ports have probably been contributing to some extent to the concentration of industries and population there. Therefore, it implies that the comprehensive economic effects brought about by the logistics bases are important in the development and expansion of the port infrastructure.

likely to improve the efficiency of the flow of people and goods, but also to energize the economy by gathering industries, to create employment, and to offer more economic effects. The re-expansion construction of Haneda is under way, and the estimation of the economic effects associated with the re-expansion includes the "value of direct effects" such as the sales of souvenirs, restaurants and other airport-related industries, traffic access (and egress) and airline tickets and the "value of ripple effects" that are measured using the input-output table. When taking in domestic flights, this is expected to encompass the capital and ten prefectures (Tokyo, Kanagawa, Chiba, Ibaraki, Tochigi, Gunma, Saitama, Yamanashi, Nagano, Shizuoka and Niigata). The total of these values is estimated to be an output increase of 763.8 billion yen, tax revenue increase of 23.7 billion yen and jobs for 78,901 workers. If 30 thousand international flights per year are operated, an output increase of 1,251.3 billion yen, tax revenue increase of 38.3 billion yen and jobs for 130,552 workers can be expected. This demonstrates how substantial the economic effects of the expansion of logistics centers could be. The estimated increase in the tax revenues concerns only the prefectural taxes, and the grants for municipalities having state-owned assets and the increase in municipal taxes are not included.



While Japan has selected its super hub ports (specifically designated important ports) and aimed to build mega-terminals, efforts to build not only the container terminals, but also logistics bases including the coastal areas behind the terminals must be made from now on. Such discussions have naturally been held in the past; however, the changes in the business models of the major ports in Asia have transformed the competitive environment, and the ports in Japan, too, are now required to seek unified operations, including relevant industries such as distribution and warehousing, and to accelerate the preparation for modal shifts (changing the modes of cargo transportation) so as to allow lead time and cost reductions and security improvements to facilitate the construction of global supply chains by the cargo owners.

The Port of Pusan in Republic of Korea, fearing competition from the ports in China (e.g., the Port of Shanghai), continues to increase its container volume and build massive infrastructure, and has been seeking new business models to add more value by, for instance, incorporating tasks such as unpacking and sorting of the goods. Japan's major ports, too, may quickly lose even the operations handled domestically in the past to other ports in Asia unless they promptly and flexibly respond to the changes taking place in Asia.

In recent years, more industries have been actively built and are growing in local areas surrounding the domestic ports (see Column Table 22-2). From now on, based on the discussions for the formation of coastal area logistics bases, reconsidering the value of "ports as an industry" and viewing them as one unit encompassing the local communities while seeking new business models for Japan will lead initially to the country's recovery in port and logistics businesses that have been outperformed by Japan's Asian counterparts and ultimately to the revitalization of local communities. Moreover, a "port" does not simply represent an industrial base but a node of economic and industrial activities, and Japan needs to build its original cross-sectional and multi-layered logistics business models quickly and restructure the community and industrial policies with the "ports" as the core.

		Economic effects		
Port	Overview of community revitalization	Increased investment	Number of jobs created	
Port of Nakatsu, Oita Pref.	Auto factories and related companies entered when the terminal opened in 2004	100 billion yen	5,300 workers	
Port of Hitachinaka	Exports of industrial machinery has been steadily increasing since the terminal opened in 2000 Industrial machinery manufacturers also joined in recent years	53.5 billion yen	740 workers	
Port of Sakai Senboku, Osaka Pref.	Large LSD manufacturers entered the coastal area, which induced an increase in related infrastructure facilities, parts and material suppliers and equipment manufacturers. Expected to develop into a "21st century model industrial complex."	With an investment of one trillion yen, the ripple effects are more than 1.5 trillion yen (estimated by Osaka Pref.)		

(3) Improvement of international competitiveness of the logistics industry for achieving seamless distribution networks

As the interdependence between Japan and other Asian countries grows greater, cargo owner companies demand speedy, seamless, and low-cost international distribution in Asia. Logistics businesses providing such advanced and diverse distribution services are also expected to make further efforts to strengthen their international competitiveness. Considering the necessity of meeting the demands of cargo owner companies for safe, reliable, and fast transportation and the greater presence of comprehensive logistics giants (integrators¹⁷⁵) of the United States and Europe, it is essential to promote the advancement of distribution services including support for the development of comprehensive international logistics business.

(Active participation of foreign-owned logistics companies in the Asian market)

Foreign-owned logistics companies have been actively entering the Asian market in recent years. In fact, the trends in the value of inward direct investment (flow) in the transportation industries of China and Republic of Korea (and Japan) indicate active investment in China and Republic of Korea as opposed to that in Japan, suggesting increasing participation of foreign-based logistics companies in these countries (see Figure 2-4-69).

¹⁷⁵ An integrator refers to an airline company that combines air transportation and collection and delivery using trucks, handles primarily lightweight cargo such as documents and parts, and covers the complete process for door-to-door express services.



The markets in China and Republic of Korea have been joined by logistics companies from the United States, Europe, and Japan and are flourishing. DHL, FedEx, and UPS, sometimes referred to as the three largest integrators from the United States and Europe, for example, positioned Asia as a new strategic base at an early stage and expected that the air cargo market in China, among other East Asian countries, would grow, thus expanding their bases and networks within China. DHL from Germany has designed an Asia-Pacific logistics base capable of 24-hour operation near Hong Kong Airport and positioned it as a logistics center serving not only China but the whole of Asia. The facilities are scheduled for expansion in 2008, and the company also plans to construct a large hub in Shanghai, China by 2010 for deliveries to the northern Asia region. FedEx from the United States is planning to relocate its Asia-Pacific logistics center from Subic Bay in the Philippines to Guangzhou Baiyun International Airport in China and is already constructing a hub base. UPS, also from the United States, plans to build a large air cargo hub in Shanghai, with construction beginning in August 2007. In addition, UPS has announced its plan to relocate its current Asian hub in the Philippines to Shenzhen in the Pearl River Delta, China. The new Asian hub, which will be equipped with facilities to provide unprecedented levels of services, is scheduled to be completed and start operating in 2010. As this shows, European and US companies are aggressive in the development of hub facilities for air logistics in China, and their future activities should be observed.

(Efforts of Japanese logistics companies in Asia)

The entry of Japan's logistics companies into the Asian market has gradually become more active.

In April 2008, an airline company, All Nippon Airways (ANA), and forwarders (air cargo consolidated service), Nippon Express and Kintetsu World Express, jointly established an

international express business called All Express Corporation¹⁷⁶. All Express Corporation was also funded by Yusen Air & Sea Service and MOL Logistics, both of which are also freight forwarders. All Express Corporation is domestically based in Haneda and Kansai International Airport and began its home delivery service from Japan to Shanghai and from Japan to Hong Kong in July 2008. The company plans to expand its services provided in Asia to serve the transportation demands of locally operating Japanese companies in the second half of 2009 when ANA will have built an air cargo transportation network using Naha Airport in Okinawa as a hub. Yamato Holdings is currently located at six places in Asia providing international delivery services between Japan and other Asian countries and founded a logistics-related local company in India in March 2008. Because a number of Japanese auto manufacturers have been entering the Indian market at present, Yamato plans to provide international freight services between Japan and other Asian countries.

Further promoting such spread of Japan's logistics companies into Asia and providing locally operating Japanese companies with careful and detailed services at which Japanese logistics businesses excel will be essential.

4. Financial and capital market systems and policies aiming to take in the vitality of Asia

As explained in the previous sections, industrial productivity and competitiveness must be improved through constant innovation in order for Japan to achieve continuous growth in the face of intensifying global competition. It is also important to increase the country's investment earnings as its income balance (employee compensation and investment earnings) continued to grow and exceeded the trade balance in 2005 for the first time.

In the efforts to overcome such challenges, the enhancement and strengthening of the financial and capital markets and the functions of financial institutions in Japan would constitute a significant contribution¹⁷⁷. In addition, considering the low level of interest and dividend income in Japan's households as described in Section 2, the domestic financial and capital markets must be revitalized to increase investment opportunities.

As the following explains, however, the financial and capital markets and financial institutions in Japan do not necessarily have an advantage over those of other countries in areas such as the convenience of the markets, profitability of the financial industry, and the availability of finance-related human resources, which suggests a delay in Japan's response to globalization. In this section, the issues arising from the efforts of Japan's financial and capital markets and financial industries to improve their international competitiveness and enjoy the benefits of globalization in the future will be discussed.

(1) The current condition of the financial and capital markets and financial industry in Japan

 $^{^{176}\,}$ A business that handles small air cargo that weighs less than 30 kg.

¹⁷⁷ For instance, promotion of innovation and business reorganization through utilizing the money supply and providing advanced financial products and services help increase the profitability of businesses and reduce the business risk. Effective use of information gathering techniques, expertise, skills, and networks possessed by financial institutions becomes an important factor that supports the strategies of businesses in extending their value chains abroad.

(a) Financial and capital markets

(Decline in the international presence of the Japanese stock market)

The Japanese stock market's share of global stock markets has been declining. In terms of market capitalization, Japan's Tokyo Stock Exchange ranked second in the world at the end of 2007; however, the capitalization of the stocks listed on the New York Stock Exchange in the United States, the world's largest exchange, was 15.7 trillion US dollars, representing approximately 3.7 times that of Tokyo at 4.3 trillion US dollars (see Figure 2-4-70). The growth of stock exchanges between the end of 1990 and the end of 2007 was conspicuous in Latin America and other parts of Asia (except Tokyo). The market capitalization of the Tokyo stock exchange increased approximately 1.5 times in contrast to that of London, New York, and some other stock exchanges in developed countries that grew four to five times (see Figure 2-4-71).

The percentage of foreign companies in the shares listed on the Tokyo Stock Exchange is relatively small. Changes in the number of listed foreign companies indicate a substantial decrease from the peak of 125 companies (in 1990 and 1991) to 25 at the end of 2007 to become approximately one fifth. A comparison of the number of companies listed on the stock exchanges in several countries (2007) reveals that, while the Tokyo Stock Exchange is comparable to those in the West in the total number of listed companies, with only 25 foreign companies listed, it is far below New York (421) and London (719) (see Figure 2-4-72). Within Asia too, the number of foreign companies listed on the Singapore Exchange is 290, considerably greater than that of Tokyo.

Inter-market competition in commodity futures markets is constantly intensifying across national borders and sectors owing partly to fierce international competition for resources and energy and partly to ever more active global movement of funds. In particular, Japan's commodity futures market has been sluggish, with its volume reducing by almost half in the last three years, while overseas derivative markets have been growing rapidly. This makes the improvement of Japan's market competitiveness an urgent matter.



Figure 2-4-70 Market capitalization ranking of major stock exchanges around the world

Source: World Federation of Exchanges statistics



Figure 2-4-71 Growth in the market capitalization of the world's stock exchanges (1990–2007)

Figure 2-4-72 The number of listed companies in the financial and capital markets (2007)



(Feared dispersion of financial management functions)

As Japanese companies advance into global markets, there has been a trend of moving "financial management functions" accompanied by various financial affairs from within Japan to outside the country. A survey of finance directors of large Japanese companies¹⁷⁸ conducted by the Ministry of Economy, Trade and Industry found that 11.9% of the companies operating overseas spread their financial functions outside the country in addition to having them at their head office in Japan. The

¹⁷⁸ Ministry of Economy, Trade and Industry (2008c), "WAGAKUNI KIGYOU NO KINYU NIZU TOU NI KANSURU ANKETO CHOUSA" (April 2008). The survey was conducted among 3,700 publicly traded companies excluding financial institutions.

destinations of such functions included China (30.9% in Shanghai and 20.0% in Hong Kong) and Singapore (32.7%) in Asia and Germany (21.8%), the United Kingdom (14.5%), and the Netherlands (12.7%) in Europe as the countries with a large share. As the reasons for the relocation, the proximity to business locations was selected by the largest number of respondents (81.8%) while advanced financial infrastructure (23.6%) and locally provided preferential treatment such as tax benefits (21.8%) were also considered important. At the time when the appeal of Japan as a financial center is declining as noted earlier, any inferiority of Japan to other countries (particularly other Asian countries) in the convenience of the market, institutional competitiveness, and other benefits may result in the outflow of expertise and human resources related to the financial functions of Japanese companies to other countries in the future.

(b) Financial industry

(Low value-added growth rate of the Japanese financial industry compared to the United States and United Kingdom)

The growth in the added value of the financial industry in the last decade has been 2.06 times for the United States and 2.67 times for the United Kingdom, with both achieving particularly high economic growth since the 1990s when compared with other developed countries. The rate of such growth in Japan, in contrast, has remained low at 1.12 times (Figure 2-4-73).



Figure 2-4-73 Value-added growth in the last decade

Note: The value of 1996 (1995 for the U.K.) was used as a starting point and compared with 2006 for Japan, the U.S., and Germany and with 2005 for the U.K.

Sources: Japan: National Accounts; U.S.: BEA Statistics of the Department of Commerce; and the U.K. and Germany: Eurostat.

(Comparison of profitability with financial institutions of other countries)

In the post-bubble era, Japanese financial institutions have been striving to dispose of non-performing loans. Their earnings and equity capital have been steadily recovering in recent years. Some point out, however, that such recovery in earnings is attributable to a large allowance for bad debts that have been accumulated in the process of disposing of non-performing loans that have become unnecessary due to the improvement in the financial standing of debtor companies, successful

corporate restructuring, and other factors, thereby reducing the cost of credit. The income from interest and commissions has actually been decreasing or stagnant; therefore, the fundamental earning power of Japanese financial institutions has not necessarily been improving¹⁷⁹. The profitability of financial institutions (banking sector) in the United States and Japan reveals, for instance, that the recent return on assets (ROA) of Japanese financial institutions, which has at times fallen below zero, have been lower than those of US counterparts (see Figure 2-4-74). The changes in the profit margin between lending and deposits also indicate that the position of Japanese financial institutions remain lower than that of financial institutions in the United States (see Figure 2-4-75).



Notes: "Analysis of Financial Statements of All Banks" published by the Japanese Bankers Association for each year was used for Japan, and "national aggregate" values in the "Commercial Bank Report" of the FDIC "Historical Statistics on Banking" were used for the U.S. Both the U.S. and Japan are based on the Income before tax.

Source: Japan: The Japanese Bankers Association "Analysis of Financial Statements of All Banks"; U.S.: FDIC "Historical Statistics on Banking"

¹⁷⁹ Summary of a speech given by Toshihiko Fukui, the then Governor of the Bank of Japan, "Toward Strengthening Competitiveness of Japan's Financial System," (November 30, 2007) and Bank of Japan "Financial System Report" (September 2007).



Figure 2-4-75 Changes in the profit margin between lending and deposits (Japan and the U.S.)

Notes: 1. Profit margin between lending and deposits = yield on loans – yield on deposits and credit 2. The values for nationwide banks were used for Japan.

Rate of loss on disposal of bad debts = (amount transferred to allowance for bad debts + amount of loans written off)/loans outstanding 3. Yield on loans for the U.S. in the presentation is the interest income on loans and leases/net loans and leases Yield on interest-bearing debts was derived from total interest expenses / total interest bearing liabilities.

The rate of loss on disposal of bad debts was derived from (provision for loan and lease losses + net loan and lease charge-offs)/net

Sources: Japan: The Japanese Bankers Association "Analysis of Financial Statements of All Banks"; U.S.: FDIC "Historical Statistics on Banking"

(Credit balance for low growth market)

loans and leases.

Japanese financial institutions have been lagging behind in their business development in overseas markets, particularly in the fast-growing emerging economies.

The percentages of the total amount of credit provided by banks in major countries¹⁸⁰ to emerging and developing countries in Asia and Oceania, Russia and Central and Eastern Europe, the Middle East, Africa, Latin America, and Caribbean countries, etc. were 16.5% for the United Kingdom (634.5 billion US dollars), 29.0% for the United States (496 billion US dollars), 9.7% for Germany (430.9 billion US dollars), 10.7% for France (395.3 billion US dollars) and 26.7% for Spain (331.6 billion US dollars) at the end of 2007. Japanese banks, on the other hand, supply only 193.7 billion US dollars, or 8.4%¹⁸¹ of the total amount of credit. In addition, a comparison of Japanese, US, and UK banks in the changes in the balance of credit granted in Asia and Oceania shows a continuous increase in the credit provided by Japanese banks, which was larger in amount than that of the US and UK banks, between the late 1980s and 1997. Since the 1997 Asian Financial Crisis however, the credit provided to Asia and Oceania decreased and, despite the recent recovery, has not caught up with the speed of growth in the credit provided by the United States and United Kingdom. While the US and the UK banks lent 232.4 billion and 302.1 billion US dollars respectively in Asia and Oceania, the balance of the loans provided by Japanese banks, which are geographically closer and have closer economic ties with those regions, amounted to 127.5 US dollars, which is less than half of the balances of the United States and United Kingdom¹⁸² (see Figure 2-4-76). Besides the financial and capital markets, a decline in the presence of the financial industry in Asia is also feared.

¹⁸⁰ Banks reported by BIS

¹⁸¹ BIS statistics

¹⁸² BIS statistics—the data is as of the end of 2007.



Figure 2-4-76 Transition of the balance of credit provided in Asia and Oceania by banks from the U.S., U.K., and Japan

Notes: "Asia and Oceania" excludes Australia, New Zealand, and Japan. Source: BIS statistics

(Competitiveness of the financial industry lagging behind in overseas markets)

M&A Advisor Ranking, for instance, presents Japanese financial institutions in top positions within Japan; however, the ranking in the whole of Asia excluding Japan does not include any Japan-based financial institutions in the ten highest positions, implying low competitiveness of Japanese financial institutions abroad (see Table 2-4-77). Shares in the syndicated loan composition also reflect the large, globally active financial institutions from the United States and Europe and the contrastingly minor participation of Japanese financial institutions (see Figure 2-4-78).

Table 2-4-77	7 M&A	Advisor	Ranking	(2007)
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M&A Advisor Ranking in Japan
(based on trading volume)

M&A Advisor Ranking excluding Japan
(based on trading volume)

	Advisor	Trading volume (million U.S. dollars)	Country
1	Nomura Securities	29,121	Japan
2	Citigroup	16,019	U.S.
3	GCA	15,767	Japan
4	Mizuho Financial Group	15,108	Japan
5	Mitsubishi UFJ Financial Group	14,518	Japan
6	Daiwa Securities	12,917	Japan
7	Morgan Stanley	11,887	U.S.
8	Goldman Sachs	11,198	U.S.
9	Merrill Lynch	10,574	U.S.
10	KPMG	9,479	Netherlands

&A Advisor Ranking excluding Japan
(based on trading volume)

	Advisor	Trading volume (million U.S. dollars)	Country
1	UBS	53,757	Switzerland
2	Citigroup	43,226	U.S.
3	Goldman Sachs	39,859	U.S.
4	Morgan Stanley	35,008	U.S.
5	J.P. Morgan	34,092	U.S.
6	Credit Suisse	27,449	Switzerland
7	Deutsche Bank	24,190	Germany
8	Lazard	22,020	U.S.
9	CIMB	14,828	Malaysia
10	HSBC	14,370	U.K.

Notes: Data period between January 1 and September 30, 2007 Source: Thomson Reuters



Figure 2-4-78 Share in the syndicated loan composition

(Financial service human resources)

For financial institutions to seize earning opportunities and for businesses to engage in timely low-cost financing, human resources equipped with advanced and extensive knowledge of financial and business affairs who are capable of using such knowledge in practice are required.

In particular, the needs for financial management have become increasingly sophisticated and diversified in recent years as businesses enter the global arena and confront new challenges such as more complex risks¹⁸³. M&A has become one of the important growth strategies for companies faced with intensifying global competition, and financial institutions may be increasingly expected to provide advisory functions such as the development of appropriate financing schemes.

Foreign financial institutions are assessed as performing better than their Japanese counterparts in their reactions to such new financial needs. A survey conducted by the "Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance"¹⁸⁴ reveals that Japanese financial institutions are considered relatively inferior to those from other countries in experience in M&A and other advanced financial services and in the latest and globally competitive products and services (see Figure 2-4-79). In this survey, not only financial institutions but many other businesses stated that they were in need of employees who were capable of adequately understanding new propositions from

¹⁸³ In the corporate finance of large companies, for instance, new financial needs such as achieving the best mix for procuring funds instantly and at low cost using instruments like medium term notes (MTN) and hybrid securities depending on the growth state, taking the corporate value and shareholders' equity into consideration, managing risk appropriately through derivatives and other financial instruments, using project finance to appropriately manage the risks associated with individual business investment, and using corporate financial assets such as pension assets efficiently are growing.

¹⁸⁴ An industry-academia joint committee was established in June 2007 in response to an appeal by the Ministry of Economy, Trade and Industry. It addresses the issues in and makes recommendations for building the infrastructure for developing "highly qualified human resources in finance" who will contribute to the advancement of the financial affairs of business companies. The Financial Services Agency, Ministry of Education, Culture, Sports, Science and Technology and Bank of Japan also participate as observers.

financial institutions and carrying out appropriate negotiations with them¹⁸⁵, demonstrating the necessity of acquiring human resources who excel in finance.

This is suggested to be a consequence of the delay in the globalization of Japan's financial and capital markets resulting in the human resources in Japanese financial institutions having limited experience in providing advanced financial products and services as compared to those in foreign financial institutions¹⁸⁶. In addition, there may be problems in the development of educational curricula that allow adequate learning of the expertise required in global financial affairs¹⁸⁷.

Figure 2-4-79 Assessment of Japanese financial institutions in comparison to foreign-based financial institutions



Notes: In a questionnaire conducted by the Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance in November 2007 (respondents: 3,335 business companies including large publicly traded companies with 300 or more employees and large privately owned companies with 1,000 or more employees excluding those in financial and insurance businesses), a question, "What do you think about the representatives and products of the Japanese financial institution that your company uses the most often when compared to foreign-based financial institutions?" was asked and the above represents the answers. The numbers in the parentheses are the number of companies that answered

Source: The Industry-Academia Joint Committeee on Highly Qualified Human Resources in Finance (2008), "KOUDO KINYUU JINZAI NO IKUSEI KATSUYOU NI MUKETE".

(2) Background of the slow revitalization of Japanese financial and capital markets and financial industry

¹⁸⁵ In a questionnaire conducted by the Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance in November 2007 (respondents: 3,335 business companies including large publicly traded companies with 300 or more employees and large privately owned companies with 1,000 or more employees excluding those in financial and insurance businesses), 26% answered "I think so" and 40% answered "I somewhat think so" to the question, "Do you think that human resources in business and finance who adequately understand new proposals from financial institutions are insufficient?" Similarly, to the question, "Is your company able to carry out adequate negotiations with financial institutions?" 36% answered, "We understand the proposals, but we have not asked questions on the prerequisites or made counterproposals," 7% answered, "We have not adequately understood the proposals and we simply obtain competitive bids and negotiate," and 5% answered, "We basically rely on the financial institution with which we deal and rarely engage ourselves in negotiations." This suggests that nearly half of the respondents recognize that their employees' skills in negotiating with financial institutions are not satisfactory.

satisfactory. ¹⁸⁶ The Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance (2008), "KOUDO KINYU JINZAI NO IKUSEI KATSUYOU NI MUKETE: HOUKOKUSHO"

¹⁸⁷ Concerning universities that are the research and educational institutions for financial studies, the institutions to which the article authors in an international finance magazine, the Journal of Finance, belonged in 2006 included universities in Republic of Korea and Hong Kong among other Asian countries but did not include any of the universities in Japan.

(a) Delay in the development of systems for the listing of foreign companies' shares

As mentioned in the previous section (1), the number of foreign companies listed on the domestic stock exchanges has been decreasing in contrast to the dramatic development of overseas markets associated with the recent global expansion of financial transactions.

The causes for this are said to be that listing foreign companies in Japan requires, for instance, that the accounting reports for the last five periods be disclosed in the Japanese language and based on Japanese accounting standards unless otherwise approved by the Commissioner of the Financial Services Agency as foreign accounting standards that adequately protect the public interest or investors and that the financial industry, law and accounting firms, and related businesses lack human resources, in addition to the worldwide trend of eliminating cross listing and the slowdown in Japan's economic growth.

(b) Delay in the response to diverse needs in fund management and financing (Firewall regulations)

In Japan, Article 65 of the former Securities Exchange Law required the separation of banking and securities business using the Glass-Steagall Act (1933) in the United States as a reference. At present, while the separation of banking and securities business has been maintained by Article 33 of the Financial Instruments and Exchange Law, cross entry between banks and securities business through subsidiaries in different types of business has been permitted by the Financial System Reform Law since 1993. Along with this, firewall regulations were adopted between banks and securities companies aiming to prevent the adverse effect of conflict of interest and the abuse of banks' dominant position¹⁸⁸. The restrictions have been eased from time to time since then.

In Japanese industries, too, the expectations for comprehensive financial services that encompass both debts (corporate bonds, etc.) and equities (stocks, etc.) (e.g., the development or use of new financial products such as hybrid securities) and for services going beyond the distinction between banking and securities business (e.g. LBO¹⁸⁹ and M&A-related financing) have been increasing primarily among internationally operating companies, which are demanding further relaxation of the firewall regulations.

(New stock markets posing various problems)

¹⁸⁸ In the beginning, restrictions on securities companies acting as a lead manager, prohibition on joint visits to customers by a bank and securities company, prohibition on accepting customers' confidential information, restrictions on personnel exchanges, regulations for concurrently held executive positions, restrictions on office sharing, restrictions on lead managers underwriting securities issued by parent or subsidiary companies, prohibition on combining offers with credit granting and other regulations were included. Subsequently, the restrictions on the lead managers of securities subsidiaries were abolished, the prohibition on accepting confidential information was removed on the condition of customer's agreement in writing being obtained, the prohibition on joint visits was removed, the restrictions on personnel exchanges were abolished, the prohibition on office sharing was abolished, and other restrictions have been increasingly eased.

¹⁸⁹ This refers to leveraged buyout, a method of raising the funds for a purchase in the market using the assets or cash flow of the company to be purchased as security. This is repaid using the assets or cash flow of the company after the purchase.

Japan has seven new stock markets that have been opened since 1999¹⁹⁰. The number of listed companies has been steadily increasing (Approximately 100 to 150 new entrants every year since 2000) to total approximately 1,000 at all seven exchanges combined in December 2007, which is comparable to the stock markets in the United States and Europe as far as the number of listed companies is concerned.

The new stock markets in Japan are nevertheless said to be facing various problems. Some examples are an increase in the listed companies' failure to comply with laws and regulations (information forgery, fraudulent financial statements, etc.), loss of trust of investors resulting from such non-compliance, and a decrease in the number of shares listed due to weakness across the new stock markets caused by such non-compliance and loss of trust. In addition, the stock prices in the new stock markets tend to fluctuate considerably. While long-term and stable funds provided by institutional investors should be used for venture investments in an attempt to prevent extreme instability of stock prices and facilitate the growth of the new markets, the small market capitalization and low liquidity of each company listed on the new stock exchanges are considered insufficient for the fund requirements of institutional investors, and therefore, the improvement of the appeal of the new exchange markets to institutional investors may constitute another issue.

(c) Low income structure built around indirect financial services

The Japanese financial system continues to be built primarily around indirect financial services. The breakdown of personal financial assets indicates a composition in which cash and deposits have continued to comprise the largest portion since the 1980s¹⁹¹. The asset portfolios of institutional investors such as pension funds comprise only a small portion of risk money such as stocks and investment trusts in contrast to those in the United States¹⁹². As a result, many of the financial institutions rely on financial products and services such as general deposits and loans that cannot easily be competitive except in price, which is one of the factors causing the low profitability¹⁹³. Highly value-added financial services will not be adequately provided should the low profitability of Japanese financial institutions continue, which may prevent the uninterrupted supply of funds to new

¹⁹⁰ The Mothers section of the Tokyo Stock Exchange opened in 1999, Centrex (Nagoya Stock Exchange), JASDAQ and JASDAQ NEO opened in 2007, Hercules (Osaka Stock Exchange) opened in 2000, Ambitious (Sapporo Stock Exchange) opened in 2000 and Q-Board (Fukuoka Stock Exchange) opened in 2000. They have been converted from over-the-counter markets.

¹⁹¹ A comparison of the breakdown of personal financial assets as of the end of December 2007 between the United States and Japan indicates that the percentage of Japan's cash and deposits is high at 50.8% while those of stocks and investments, from which profits can be expected, are lower at 4.7% and 10.7%, respectively. In the United States, the percentage of cash and deposits is 13.3% whereas those of investment trust and stocks and investments are 14.2% and 29.4%, respectively (Bank of Japan (2008), "SHIKIN JUNKAN NO NICHIBEI HIKAKU (Fourth Quarter 2007)" (March 2008).

¹⁹² For instance, as of the end of December 2007, the percentages of stocks and investment trusts in pension fund assets were 6.6% for investment trusts and 19.5% for stocks and investments for Japan and 19.8% for investment trusts and 48.0% for stocks and investments for the United States (see Bank of Japan report (March 2008) referred to above).

¹⁹³ Another opinion is that the governance of financial institutions by shareholders is not functioning perfectly and the low profitability is accepted by shareholders (see Summary of a speech given by Toshihiko Fukui, the then Governor of the Bank of Japan, referred to above).

growth companies and efficient management of assets held by financial institutions; therefore, improving the profitability of financial institutions through the shift from indirect finance to direct finance becomes an important issue¹⁹⁴.

(3) Development of market systems and players aiming to take in the vitality of Asia¹⁹⁵

As discussed in Section 1, the development of an appropriate financial environment including direct finance is demanded in Asia¹⁹⁶. This section deals with the measures required to this end.

(a) Improving the competitiveness of the financial and capital markets

(Internationalization achieved by building a framework for the market for professionals)

Having a market that offers convenience to foreign-based companies is an essential factor in the process of internationalization of Japanese financial and capital markets. Drastic measures must be taken by the parties involved in the institutional and functional aspects while fully considering the protection of investors and other factors.

Examples of such measures from an institutional perspective may include the acceptance of corporate information disclosed in English and other languages besides Japanese and complying with major accounting standards such as the International Accounting Standards and Generally Accepted Accounting Principles¹⁹⁷. As for the functional side, establishing prompt communication in English by the market participants, reducing the time spent for examinations and procedures by increasing the number of experts in international accounting standards (e.g., certified public accountants), expanding the scope of financing, improving liquidity, and enhancing the system of communicating with major foreign countries are among the conceivable measures.

Meanwhile, in the securities market participated in by general investors, the protection of those investors must be ensured. For this reason, the market participants should be divided into general investors and professional investors, and the measures noted above should be applied to the markets participated in only by professional investors. In the West, too, there are markets for general investors in which strict rules are imposed and there are markets for professional investors such as institutional investors in which the disclosure standards are simplified¹⁹⁸. Therefore, Japan must also develop a

¹⁹⁴ In order to improve the profitability of financial institutions, setting interest rates that correspond to the risk, differentiating financial services to meet various customer needs, considering the competitiveness (brands, solutions, abilities to obtain information including confidential information, etc.) of the financial products and services to be provided, and selecting and concentrating on operations considering the future potential are said to be necessary, rather than relying solely on general financial products and services such as deposits and loans (see Summary of a speech given by Toshihiko Fukui, the then Governor of the Bank of Japan, referred to above).

¹⁹⁵ Based on the interim report of the Corporate Finance Committee of the Industrial Structure Council (December 2007), the interim report of the Commodity Exchange Committee of the Industrial Structure Council (December 2007), and the report of the Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance (February 2008).

¹⁹⁶ In order to absorb the vitality of Asia more efficiently, the competitiveness of Japanese financial and capital markets must be increased and financial institutions, personnel in finance, and other players must be developed.

¹⁹⁷ In addition, the period for disclosure should be reduced to the last three periods, etc.

¹⁹⁸ The United Kingdom has the Alternative Investment Market (AIM) and Professional Securities Market

framework for the market for professionals that will allow trading with a greater degree of freedom based on self-discipline and responsibility so as to make its own financial and capital markets comparable to those in the West.

(Improving the new stock markets)

In order for Japan to regain the trust of its investors that has been declining due to non-compliance with legal requirements by listed companies, self-discipline and governance of the listed venture businesses themselves must be improved while a system for the stock exchanges to conduct necessary and sufficient inspections must be built. Taking into account that companies' information disclosure is supported by third parties (Nomad¹⁹⁹) in the Alternative Investment Market (AIM) of the United Kingdom, quick and easy financing for growing companies must be made possible in the new stock markets of Japan by developing the framework for the market for professionals as described earlier in an effort to facilitate and support venture businesses in their information disclosure.

(The use of Japanese Depositary Receipts)

One of the means for Japan to absorb the energy of Asian and other emerging countries and facilitate its economic growth is to use Japanese Depositary Receipts (JDR). A depository receipt is a certificate issued by a domestic depository (e.g., a bank) in the country as a substitute for the original stock stored in its home country to facilitate the circulation of foreign company stocks in the domestic market. Some Asian countries prohibit the direct trading of original shares in foreign markets. Allowing companies from such countries to trade their shares in the Japanese financial and capital markets to efficiently procure funds would add to the appeal of these domestic markets and create various benefits such as the opportunities for personal financial assets amounting to 1,500 trillion yen to be invested in growing companies in Asia and elsewhere through the domestic markets. The development of systems relevant to JDR is currently underway. The use of JDR is also proposed as one of the means to acquire funds from "Japan for the Delhi-Mumbai Industrial Corridor," and increased use of JDR by companies from all over Asia is expected in the future. McKinsey & Company reports²⁰⁰ that Asia is experiencing an increasing need for infrastructure funding caused by active infrastructure investment. For Japan, therefore, applying the JDR scheme to project finance that includes infrastructure loans is also important.

(b) Improving the competitiveness of the financial industry and human resources (Significance of expanding the financial industry in Asia)

⁽PSM) and the United States has private placement securities traded only by professionals (qualified institutional investors) based on Rule 144A. ¹⁹⁹ Although there are no special criteria (financial strength, company size, business history, corporate

¹⁹⁹ Although there are no special criteria (financial strength, company size, business history, corporate performance, ratios of shares owned, etc.) applicable for a company to be listed on AIM, the company must sign a contract with a listing advisor called "Nomad." Nomad determines whether the stocks of the company wishing to be traded on AIM are appropriate for the market and, after registration, provides the company with advice and support for compliance with the exchange rules or information disclosure requirements.

²⁰⁰ The McKinsey Quarterly "Taking stock: Ten years after the Asian financial crisis" (December 2007)

Significance of expanding banking business in Asia

Growth of the financial sector brings considerable benefits to Japan's industries. The expectations for the offshore expansion of Japanese financial institutions are particularly high among the companies operating overseas. In the aforementioned survey conducted by the Ministry of Economy, Trade and Industry, 63.0% of the respondents answered "yes" to the question asking whether the overseas expansion of Japanese financial institutions was expected to bring benefits. The countries and regions in which their expansion is desired included China (47.3%), India (14.1%) and the ASEAN 4 countries (10.0%), suggesting a great need for their services in Asian countries and regions (see Figure 2-4-80).

In Asia where small- and medium-sized companies, which tend to be more financially leveraged²⁰¹ than businesses in the West, comprise a large part of the industries, traditional commercial banking continues to be important. This may leave the potential for Japan to provide its expertise that has been cultivated over the years and to contribute to the further progress of its neighbors. On the other hand, Asia, which is somewhat left behind in the global trend of shifting from savings to investments, is facing the urgent need to develop a direct financial sector²⁰² as noted earlier in Section 1-1. In fact, the survey²⁰³ of the Ministry of Economy, Trade and Industry has indicated "information on the local markets (18.1%)" and "advisory and consulting services (15.6%)" as the financial services expected of Japanese financial institutions by Japanese companies in addition to payment and exchange services (21.4%) and short-term funding (19.8%). This reflects the growing expectations not only for financial, but also for a range of information and information gathering techniques possessed by the financial industry and solutions using such information and techniques to be provided by financial institutions. Considering such diverse needs, Japanese financial institutions are demanded to provide comprehensive financial services including investment bank operations in overseas markets.

Regional small- and medium-sized companies in Japan have been increasingly entering the Asian and other overseas markets in recent years. Such regional companies are likely to appreciate the continuous provision of financial services of banks from their home regions with which they have long-term relationships in their overseas business locations²⁰⁴. Effectively using the variety of knowledge possessed by financial institutions in many different ways to assist the internationalization of Japanese companies is likely to become important for both the financial institutions and companies in their efforts to seek more business opportunities and carry out efficient management of their businesses.

²⁰¹ Financial leverage (%) = total capital/equity capital

²⁰² The volume of short-term funds provided by foreign banks in Asia has been reduced by half (from 8% to 4%) in terms of GDP ratio since the 1997 Asian Financial Crisis. At the same time, local currency-based loans have increased from 16% to 42% (see the McKinsey Quarterly referred to above). Considering such backgrounds, the business opportunities for Japanese financial institutions are likely to include providing direct finance and partnership with local banks to provide the local currency-based business.

²⁰³ See the report by the Ministry of Economy, Trade and Industry (2008c) referred to above.

²⁰⁴ Regional banks in Japan have recently been engaging themselves in partnership with local major banks in China, Republic of Korea, Hong Kong, Thailand, etc. and Western banks operating their business in Asia. In addition, some of Japan's large banks with expertise accumulated in their overseas business have been establishing alliances with regional banks and providing local information (legal system, procedures required for business development, labor management, etc.), advice, foreign exchange service, etc.



Notes: The number of responding companies: 261. The numbers in the graph represent the number of companies. Source: Ministry of Economy, Trade and Industry "WAGAKUNI KIGYOU NO KINYUU NIIZU TOU NI KANSURU ANKEETO CHOUSA" (April 2008).

Significance of institutional investors' investment in Asia

As explained in Section 2, the degree of home bias in the financial assets in Japan is high, and it is also important to increase the investment in Asia made by institutional investors such as investment trusts, pension funds, and insurance companies in order to earn income from overseas investment. The percentage of Asian stocks in the working assets of foreign currency-based stock investment trusts increased to 34.5% by the end of March 2008 and exceeded that of US stocks (32.2%) and Euro stocks (14.1%) (see Table 2-4-81). Accelerating the shift in the portfolio balance to Asia becomes important in order to absorb the vitality of the region and contribute to its development by providing direct finance in the future.

Hong Kong	11,083	
Indonesia	4,395	
Taiwan	2,370	
Australia	2,962	
Singapore	2,006	
Republic of Korea	1,321	
China	872	
Malaysia	773	
Thailand	731	
Indonesia	621	
Philippines	200	
New Zealand	86	(share)
Asia, total	27,334	34.5%
U.S.	25,463	32.2%
Euro zone	11,180	14.1%
World, total	79,176	

Table 2-4-81 Each country's asset balance in foreign currency-based stock investment trusts (100 million yen)

Source: Website of the Investment Trusts Association

Feasibility of overseas expansion through M&A

The means of financial institutions to expand into overseas markets are broadly divided into new business establishment (greenfield investment) and merger with or acquisition of an existing business. In commercial banking and other operations under severe restrictions, such as from the local legal systems or trading practices that are closely tied to the local communities, a merger or partnership with a local financial institution as appropriate may be an effective way. The breakdown by industry of the value of cross-border M&A around the world indicates that most of the M&A transactions after 2002, when the financial economy flourished because of excess liquidity, took place in the financial sector, implying the active use of M&A in the globalization of the financial sector (see Figure 2-4-82).



Figure 2-4-82 Transition of the cross-border M&A (monetary value) by industry around the world

(Development and use of "skilled human resources in finance")

As described earlier, business companies and financial institutions lack human resources equipped with advanced financial knowledge and experience, and the need for employees in the financial field in Japanese companies has been increasing both inside and outside the country. In fact, in the previously mentioned survey of the Ministry of Economy, Trade and Industry, 46.0% of the respondents from domestic and 32.4% from overseas establishments answered that the needs for human resources having knowledge of financial techniques and expertise (e.g. MBA or financial engineering degree holders) was increasing. Further, those companies that were considering the development and employment of foreign workers including international students as a measure to develop and retain human resources in the financial field amounted to 50.5% of all responding companies (multiple choices)²⁰⁵. Taking into account such results, Japan must increase the human resources capable of handling advanced financial technology while also considering the possibility of

²⁰⁵ Actively recruit international students (math and science majors) 5.4%, actively recruit international students (liberal arts majors) 5.4%, actively recruit foreigners in mid career 8.9%, develop and recruit human resources of local company 30.7%.
active recruitment of foreign workers²⁰⁶.

Among the human resources equipped with financial and related knowledge and experience, however, the types of individuals demanded by businesses and financial institutions vary widely and the abilities required differ depending on the assignments²⁰⁷. Human resource development, therefore, must respond carefully to such diverse types of individuals who are in demand. The previously mentioned "Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance" has repeatedly considered the preparation of the environment for human resource development and employment, and, in February 2008, completed a report titled "For the Development and Employment of Highly Qualified Human Resources in Finance." This report lists changing the attitudes of management²⁰⁸, establishing closer communication between industry and academia and enhancing the higher education curricula²⁰⁹, and developing a market for human resources in financial services²¹⁰ as the issues that should be addressed for the development and employment of human resources in financial services.

(4) Recent efforts made by the government

²⁰⁶ See Section 3 for the overall needs of Japanese companies for foreign workers.

²⁰⁷ Examples include funding related to corporate finance and M&A, project finance, specialized skills required primarily in business companies, or in the consulting operations of financial institutions for business companies and advanced financial engineering skills used at the forefront of the financial service industry such as risk-hedging and asset management using derivatives. Required knowledge also ranges from corporate taxation, accounting, and business to the development of financial products, marketing, asset management, and others.

²⁰⁸ Considering the case in which the advanced knowledge of finance learned in higher education is not fully used in companies, first the management team that uses such human resources must gain better understanding of the importance of finance specialization and apply it to their human resources management. The changes in the attitudes of management teams should be promoted by introducing case studies on financial affairs (M&A, etc.) conducted by business companies and financial institutions and cross-industry and department seminars on the latest themes in financial engineering such as securitized products (Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance "KOUDO KINYU JINZAI NO IKUSEI KATSUYOU NI MUKETE: HOUKOKUSHO" (February 2008)). ²⁰⁹ University curricula have not been able to fully cover the knowledge required in the operations of companies that must handle rapid changes in the business environment, and industry and academia should consider establishing close information exchange between them and developing curricula have here here the second second

operations through industry-academia cooperation. In view of the need to develop top-level human resources in advanced financial engineering in addition to the development of programs to help learn the minimum level of financial skills required, higher education curricula and instructors must also be improved to the global standard. It is also important to enhance human resource exchange between universities and companies (See the Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance report referred to above).

²¹⁰ Many financial institutions are seeking human resources equipped with advanced knowledge of financial affairs, and particularly those with work experience in financial business are needed for immediate use, be they workers in mid career or new college graduates. Some point out, however, that the human resource liquidity in Japan's labor market is limited when compared to those in the West, and a mechanism that allows fair and objective assessment of the value of human resources has not been fully established. Considering the opinions that "fair rules and practice must be established" and "some staffing agencies seem to act in an immoral manner", efforts must be made to improve the legal compliance of staffing agencies and other specific actions must be considered so as to develop an environment for the job-change market (See the Report of the Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance referred to above).

As has been discussed in this Section, considering the recent rapid development of overseas financial and capital markets and the concern about the decline in the international presence of the Japanese financial and capital markets, the government has been making further efforts to improve the international competitiveness of the country's financial and capital markets.

The Working Group on Financial and Capital Markets of the Expert Committee on Reforms Addressing Globalization established within the Council on Economic and Fiscal Policy of the government issued its first report (May 2007), which presents a reform concept consisting of three major elements, i.e., first promoting further system development to make the Japanese financial and capital markets (Tokyo) an open and easily accessible platform shared by Asian countries, secondly implementing innovation by professionals who are highly capable and responsible so as to improve the asset management skills, and thirdly improving the transparency and predictability of regulatory oversight to provide a market environment in which freedom and discipline are well-balanced. In response, the "2007 Basic Policy for Economic and Financial Reform" approved by the Cabinet in June 2007 was added with the plan that, by the end of FY2007, the Financial Services Agency would develop the "Plan for Strengthening the Competitiveness of Japan's Financial and Capital Markets" as one of the reforms for globalization and that the entire government would unite in the implementation. Taking this into account, relevant government departments have been discussing the issues raised by the reform, developing and modifying necessary systems and performing other tasks required. In the Ministry of Economy, Trade and Industry, the Corporate Finance Committee of the Industrial Structure Council has been holding discussions and making suggestions for the strengthening of Japan's financial and capital markets from the perspective of "finance for industry." Concerning commodity exchanges, the Commodity Exchange Committee of the Industrial Structure Council has been developing measures to improve the competitiveness and consignor protection²¹¹, which have been steadily implemented.

In December 2007, the Financial Services Agency finalized the "Plan for Strengthening the Competitiveness of Japan's Financial and Capital Markets", which consists of four major elements – first creation of a reliable and lively market, secondly establishment of a business environment that encourages the activities of and competition in the financial service industry, thirdly achievement of a better regulatory environment, and fourthly development of the environment surrounding the market – and states that revision of laws and development of systems required for the improvement of the competitiveness of the domestic financial and capital markets will be executed. Based on this plan, the Financial Services Agency submitted the "Bill for Amendment of the Financial Instruments and Exchange Act" to the 169th Diet, which was passed by the Diet in June this year. The Outline of the

²¹¹ Examples include an increase in market liquidity (adopting electronic systems of the world's highest level, operating 24-hour trading, reducing the cost of trading, increasing and diversifying the traded products, and promoting the market participation of major players such as financial institutions and institutional investors); collaboration and combination of the product and financial sectors (establishing ETFs, permitting capital alliance among stock exchanges, developing a system for wide-ranging products, etc.); improvement of market reliability (improving the functions of product market clearinghouses that accept liabilities based on the activities in the product market, improving transparency and fairness, and enhancing market surveillance); and in addition, promoting the activities of each player for dissolving consignor problems, promoting fund-style market participation, and encouraging online trading, loss-reduction trading, adoption of mini-products, etc.

Bill²¹² states that it aims to provide various opportunities for asset management and fund-raising through the creation of a market for professional investors and diversification of exchange-traded funds (ETFs), to provide diverse and high-quality financial services through the revisions of the firewall regulations among securities firms, banks, and insurance companies (abolition of the ban on concurrently held managerial positions across securities firms, banks, and insurance companies), to establish of systems for managing conflicts of interest²¹³ and changes to the scope of businesses of banks and insurance companies²¹⁴, and to create fair, transparent, and reliable markets through correction of the administrative monetary penalty system and other measures. As for the achievement of a better regulatory environment, the Financial Services Agency has presented four fundamentals—the optimal combination of rule-based supervision (detailed rules to apply in each case are established) and principle-based supervision (some major principles are presented to promote voluntary actions of financial institutions along the lines of the principles), early recognition of and effective measures for priority issues such as measures against the risks inherent in the financial system, respect for the self-help efforts of financial institutions, and emphasis on the incentives for them, and improvement in the transparency and predictability of administrative measures. This aims to gain accurate understanding of market trends and improve the quality of the Financial Services Agency employees by enhancing the communication with financial institutions, improving the release of information (to both inside and outside the country), strengthening the ties with overseas authorities, and upgrading the research functions. As regards the development and employment of highly qualified human resources in finance, the previously mentioned "Industry-Academia Joint Committee on Highly Qualified Human Resources in Finance" was put in place in June 2007 in response to an appeal by the Ministry of Economy, Trade, and Industry for the purpose of facilitating the system development for the sophistication of the financial affairs primarily of business companies. In addition, the Financial Services Agency has been working to support the advanced and practical financial education provided by higher education institutions and to improve the conditions for certified public accountant examinations. A "Study Group on Human Resources Specialized in Finance" has also been held to discuss the measures to develop and retain human resources specialized in finance.

Such solid implementation of the government's plans, other reforms of trading markets for improved convenience, and other benefits and closer ties established between industries and universities in human resource development are expected to improve the global competitiveness of the Japanese financial and capital markets and financial industry.

[Column 23] Competitiveness of the world's financial and capital markets (based on the Global Financial Centres Index (GFCI) of the City of London)

²¹² Website of the Financial Services Agency

²¹³ It concerns the implementation of appropriate information management and internal controls so as to prevent unfair damage to the interest of customers in trading with the company or its group company.

²¹⁴ This consists of reconsidering the scope of business of sister or related banks, reconsidering the principal operations of banks and insurance companies, increasing the exceptions in the limitation on holding voting rights of bank and insurance company groups, and adopting a system for banks to act as a proxy or agent of foreign banks.

According to the third of its ranking surveys, the Global Financial Centres Index 3 (GFCI 3)²¹⁵ concerning the competitiveness of financial and capital markets around the world, released by City of London in March 2008, London and New York rank first and second and Tokyo ranks ninth with a score lower than those of Hong Kong and Singapore. Tokyo's position nonetheless has risen one from tenth in the last GFCI and its score slightly increased together with Singapore while the scores of both London and New York have decreased (see Column Table 23-1).

Rank	Market	Score	Previous survey (GFCI 2 score)	Rank in GFCI 2
1	London	795	806	1
2	New York	786	787	2
3	Hong Kong	695	697	3
4	Singapore	675	673	4
5	Zurich	665	666	5
6	Frankfurt	642	649	6
7	Geneva	640	645	7
8	Chicago	637	639	8
9	Tokyo	628	625	10
10	Sydney	621	636	9

Column Table 23-1 Scores and ranks of financial and capital markets in the GFCI 3

Source: City of London, "The Global Financial Centres Index 3", March 2008.

The GFCI combines an analysis of the competitiveness of financial and capital markets in five areas including people, business environment, market access, infrastructure, and general competitiveness²¹⁶. The business environment (ease of starting a business, employing workers, getting credit, paying taxes, etc.) is explained using the "Ease of Doing Business Index" of the World Bank, and, according to this, Japan ranks twelfth (see Column Table 23-2). In the values of shares traded in the financial and capital markets, Tokyo ranks third as of October 2007 and six Asian markets rank above twentieth, calling for continued observation (see Column Table 23-3).

²¹⁵ The third survey following GFCI 1 (March 2007) and GFCI 2 (September 2007).

²¹⁶ The people factors involve the flexibility of the labor market, scope of business education, extent of human capital development, etc. The business environment factors cover the degree of regulatory restrictions, tax rates, the ease of doing business, etc. The market access factors cover the levels of securitization, volume and value of trading in equities and bonds, etc. The infrastructure factors include the cost and availability of buildings and office space, transport, etc. The general competitiveness is determined based on overall indicators such as price levels, economic sentiment, living environment, etc.

	Ease of doing business (overall ranking)	Starting a business	Employing workers	Getting credit	Paying taxes
Singapore	1	9	1	7	2
New Zealand	2	3	13	3	9
U.S.	3	4	1	7	76
Hong Kong	4	13	23	2	3
Denmark	5	18	10	13	13
U.K.	6	6	21	1	12
Canada	7	2	19	7	25
Ireland	8	5	37	7	6
Australia	9	1	8	3	41
Iceland	10	14	42	13	27
Norway	11	28	94	36	16
Japan	12	44	17	13	105
Finland	13	16	127	26	83
Sweden	14	22	107	36	42
Thailand	15	36	49	36	89
Switzerland	16	35	20	26	15
Estonia	17	20	156	48	31
Georgia	18	10	4	48	102
Belgium	19	19	36	48	65
Germany	20	71	137	3	67

Column Table 23-3 Value of shares traded in financial and capital markets (as of October 2007)

	Rank	Value of Shares Traded (in million US dollars)
New York	1	4,552,247
London	2	627,072
Tokyo	3	553,530
Paris	4	547,238
Frankfurt	5	374,814
Hong Kong	6	339,667
Shanghai	7	326,272
Madrid	8	284,467
Seoul	9	254,744
Milan	10	239,938
Stockholm	11	193,199
Toronto	12	179,582
Mumbai	13	166,451
Zurich	14	162,690
Sydney	15	136,215
Taipei	16	107,884
São Paulo	17	81,015
Oslo	18	64,591
Johannesburg	19	50,401
Singapore	20	46.901

Source: City of London, "The Global Financial Centres Index 3", March 2008. Original source: World Federation of Exchanges statistics

The GFCI 3 focuses on personnel skills²¹⁷ in particular as a key element that determines the competitiveness of financial centers. The skill assessment uses the percentage of higher education graduates in the population (Tertiary Graduation Ratio), the number of top ranked EMBA (executive MBA) programs (MBA programs designed for corporate executives), and the ease of hiring skilled workers as the criteria, and the ten highest ranking markets are presented in Column Table 23-4.

²¹⁷ The study focuses on the availability of skilled human resources and the ease of gathering such human resources.

	% of higher education graduates in the	Number of top ranked	Ease of hiring skilled
	population (Tertiary Graduation Ratio)	EMBA programs	workers (rank)
London	39.4	7	21
New York	34.2	6	1
Hong Kong	12	4	23
Singapore	-	2	1
Zurich	25.4	-	20
Frankfurt	19.9	1	137
Geneva	27.4	-	20
Chicago	34.2	1	1
Tokyo	36.1	-	17
Sydney	59.4	1	8

Column Table 23-4 Financial and capital markets in view of skills-related factors

Notes: Ten highest ranking markets in GFCI 3

Source: City of London, "The Global Financial Centres Index 3", March 2008.

[Column 24] Efforts of the United States to increase the competitiveness of its financial and capital markets and financial services

The New York stock market is by far the largest in the world in terms of the value of shares traded, combined capitalization of listed companies, and other measures and maintains high competitiveness. As London and Asian markets grow larger, however, the number of companies listed has been decreasing, and the US government and market participants now have a growing concern that the New York market may lose its position as the world's top financial and capital market, possibly causing the US economy to lose its competitiveness.

With the awareness of such issue, a report entitled "Sustaining New York's and the US' Global Financial Services Leadership" (the "Report") was compiled in January 2007 under the initiatives of Mayor Michael Bloomberg and Senator Charles Schumer of New York City²¹⁸.

The Report states that the percentage of those listed in the United States among all publicly traded companies around the world whose shares are worth more than one billion US dollars decreased from 57% in 2001 to 16%. In 2003, 31% of the shares traded on the New York market were of foreign companies, which successively declined to 19% in 2004 and 8% in 2005. Even the trading of small-cap companies has been shifting in part from NASDAQ to AIM in London²¹⁹. Further, in contrast to the employment in financial services and related businesses in London that increased by 4.3% to reach 318 thousand workers between 2002 and 2005, that of New York was down 0.7% to 328.4 thousand workers.

Large-scale interviews of corporate managers around the world were conducted to prepare the Report, in which human resources in finance, fair and predictable legal systems, the government's support for business needs, and regulatory requirements attractive to businesses were raised as the aspects important in the financial service business. The interviews also asked the respondents to compare the New York and London markets in these four aspects, and the "availability of human resources in finance" was the only one where New York was considered better than London.

While one of the factors attracting skilled human resources in New York is the cost of living that is lower than that in London, the "quality of life" is indicated as nearly equal in both cities. There has been an opinion that a number of problems, including a limit that has been placed on the number of H-1B visas²²⁰ to be issued and the less predictable approval rate of issuing B1 business visitor visas and B2 tourist visas²²¹ since the September 11 attacks, are restricting qualified human resources from gathering in the New York market.

²¹⁸ "Sustaining New York's and the US' Global Financial Services Leadership" surveys and interviews were conducted by McKinsey & Company.

²¹⁹ This report states that 526 small-cap companies have listed on NASDAQ and 870 on AIM since 2001. New additions since the beginning of 2005 have been 224 to NASDAQ and 484 to AIM. In 2004, the market capitalization of NASDAQ was 16.5 billion US dollars, far greater than that of AIM at 4 billion US dollars. However, during the first ten months between January and October 2006, the volume on NASDAQ was 11.9 billion US dollars and that on AIM was 10.4 billion US dollars.

 $^{^{220}}$ A visa for US companies to temporarily employ workers with undergraduate or higher degrees. See (2) in this section for details.

²²¹ One problem that has been pointed out is that the issue of a visa is unpredictable even when attempting to attend an important business meeting held in the United States from outside the country.

New York was considered better in the predictability of the legal system and the fairness of the judicial process than London by more respondents than otherwise. The high cost of legal matters²²² attributable to the frequent litigation in the United States and the low predictability due to the complexity of its legal system²²³ pose concerns. Another difference between the United States and the United Kingdom can be found in their regulatory systems, which are "rule-based" in the United States and "principle-based" in the United Kingdom. The Financial Services Authority (FSA), the UK's supervisory agency for financial services, has presented 11 principles ("basic guidelines for general action") that include "a firm must conduct its business with integrity," and "a firm must pay due regard to the interests of its customers and treat them fairly."²²⁴ The report reveals the impressions held by corporate managers that the UK regulations are clearer, fairer, more unified in execution, and more cost effective in legal compliance and the regulatory structure is easier to understand than the US regulations. In particular, the original framework of the United States²²⁵ in response to the Sarbanes-Oxley Act (SOX) and Basel II Capital Accord, which contains the new regulations of the Bank for International Settlements (BIS), and reconciliation with the US accounting standards required of non-US companies have been criticized as being detrimental to competitiveness.

Taking into account all such factors, the report makes the following recommendations to increase the competitiveness of the US financial and capital markets.

Recommendation 1:	Provide clearer guidance for implementing SOX.
Recommendation 2:	Implement securities litigation reform.
Recommendation 3:	Develop a shared vision of US government agencies for financial
	administration and a set of supporting regulatory principles.
Recommendation 4:	Ease restrictions facing skilled non-US professional workers.
Recommendation 5:	Recognize International Financial Reporting Standards (IFRS) ²²⁶
Recommendation 6:	Implement the Basel II Capital Accord (without modification exclusively
	for the United States)
Recommendation 7:	Form an independent commission on financial and capital market
	competitiveness.
Recommendation 8:	Modernize financial services charters ²²⁷ .

The necessity of increasing the competitiveness of the US financial and capital markets is strongly

²²² Fines for illegal conduct are very expensive, with not only the company but also the manager/owner being required to take personal responsibility. The US law is in some cases applicable outside the United States, etc.

²²³ The intricately coexisting federal and state level legal systems have been raised as a problem.

²²⁴ See the address by David Strachan, Director of Major Retail Groups, Financial Services Authority, United Kingdom at the European Commission Symposium in Japan "Creating a Better Regulatory Framework for Financial Services" (June 14, 2007). Website of the British Embassy in Japan, June 2007. ²²⁵ While other countries are acting consistently with the adoption of "Basel II," the United States has been

²²⁵ While other countries are acting consistently with the adoption of "Basel II," the United States has been suggesting that Basel II should be modified before adoption.

²²⁶ This means that the International Financial Reporting Standards are to be respected and reconciliation with the Generally Accepted Accounting Principles (GAAP) is not required of the companies listed on stock exchanges in the United States.

²²⁷ The report points out that the National Bank Charter that regulates the banking business, for instance, was established far back in 1863 and the 1999 "Gramm-Leach-Bliley Act" also needs modification to correspond to recent changes in the environment.

recognized also in the US government. In November 2006, Henry Merritt Paulson, the US Secretary of the Treasury, stated in his address on the issues concerning the US financial and capital markets that the presence of the US markets was declining as overseas financial markets were rapidly developing, and that well-balanced, modernized and efficient regulations were needed, more effective and efficient methods should have been used to implement SOX, and that the regulations should have been shifted from the rule-based system to a principle-based one. In March 2007, the "Conference on Capital Markets Competitiveness" consisting of experts from both the public and private sectors was established for the purpose of financial regulatory reforms, in which discussions for regulatory reform in the financial sector were held and the report, "Blueprint for a Modernized Financial Regulatory Structure," was prepared in March 2008.

5. Construction of a new mechanism that creates innovation in Japan: Formation of Asian innovation centers through open innovation

As declining birthrate and an aging population is developing, Japan is confronted by the shortage of "human resources"—the management resource that is most critically needed in the world at present. Thus, the basis of Japan's new development strategy has to be the following: Leading the continuous development of the world economy by playing the role of the core functions as a place of creation, i.e., an "innovation center" while actively using the resource engendered by increasing globalization such as the growing markets of emerging countries and with superior human resources with great potential.

To this end, as thus far discussed, Japan must bring in management resources, namely people, money, technology, and knowledge from Asia and other regions of the world and combine these with its own management resources to establish a mechanism for creating new value. In other words, it is important for Japan to unite domestic and overseas management resources as the core of the "Asian innovation" that promotes Asian-wide knowledge creation, which was discussed in Chapter2-1 and encourage "open innovation" that creates new added value.

The "vertical integration" innovation of large companies that has been considered a strong point of Japan functioned effectively for the age when the directionality of technological development had been clear, and research and development had been financed by the internal capital of the enterprise. But research and development through open innovation is regarded as one of the important alternatives for the age when the economic and social structure of a country undergo substantial changes which mean that the technology is upgraded and complicated more and more and investors in the world begin to globally look for good enterprise to invest.

On the other hand, Japan must recognize that there is a possibility that the deepening of global and open "connections" will expose it to the risk of resource outflow. This means that the procurement of human resources, funds, technology or expertise from global markets would not serve the desired purpose unless appropriately applied to the creation of national wealth. Some foreign countries are consequently emphasizing strategies for converting the management resources obtained in global markets into their own national wealth²²⁸.

The accomplishments of research and development carried out using the management resources of Japan should ultimately bring the benefits to Japan's national wealth. Japan now needs to seek further global linkages and build a mechanism for creating national wealth from intellectual property invented from such open research and development activities while preventing it from the illegal outflow to overseas. In other words, Japan now needs to maximize the benefits, while the minimizing risks that would result from the outflow of technology by maintaining the economic and social structure it opened up to the world and providing the "places" and "opportunities" for management resources from Asia and other parts of the world.

(1) Construction of a new mechanism of creating innovation

As discussed in Chapter2-1 and 2- 3, the form innovation takes has been shifting from that of "closed innovation" based on vertical integration in which the same company completes the entire process from R&D to commercialization to that of "open innovation" in which the process of R&D or commercialization is carried out by using external technology and other resources. Such "opening up" of the innovation process is one of the major trends in the current industrial structure. In the fashion industry, for instance, a business model that creates new value by "combining" existing brands has been emerging²²⁹.

The "open innovation" model creates added value through the synthesis of heterogeneous technologies beyond an organization's or industry's existing technological system, in which the combination of technology and human resources across "companies," "industries," and "academia" becomes important. In the United States and other countries, some large companies are actively combining external technology and human resources for R&D and product development. In addition, a new business model specializing in such integration of technology and human resources has been appearing. In some cases in the United States, where large-scale funding amounting to 200 billion yen is available, engineers working with cutting-edge technology link up with elite scientists to create new

²²⁸ There is the view that such a strategy represents a new form of serving the national interest by maintaining national benefits while also benefiting from globalization (Yamada, A., 2001). Viewing the changes in the market environment brought about by globalization from a national perspective, globalization constitutes an important factor affecting policy position of a nation as symbolized by China's joining the WTO in 2001. In addition, the fusion of national borders, and reduction of the roles of sovereign states that were to be replaced by a super-nation-like actor, were expected. In contrast to such predictions by many experts, however, globalization has not necessarily reduced the roles of national governments. Instead, the view that the progress of globalization has initiated an era of new international competition appears more convincing.

²²⁹ In recent years, not only the brands of conventional apparel manufacturers, but select shops that combine these brands have been increasing in number. Consumption through select shops is considered part of "opening of consumption" in the sense that it creates new added value by combining existing goods and services. In addition to the "high-end fashion" specialized in by a number of European brands, a variety of fashion categories including "young adult" and "girly styles" exist in Japan, suggesting the potential for creating combinations of these categories. In China, for instance, Japanese female fashion magazines have become extremely popular, which implies the competitiveness of Japan in initiating global trends and its potential for leading the "opening of consumption" in the Asian and global fashion industries. Chapter 4-5-2 (3) addressing the vitalization of consumer markets describes the relevant efforts that have been made.

inventions and patents while external inventions are also actively adapted through the purchase of intellectual property rights or licenses.

This allows for forming extensive intellectual property portfolios, generating profits by license, etc ,and rewarding the engineers and scientists. This process aims to reduce risk in the research and development of cutting-edge technology by initiating R&D trends such as sharing technical roadmaps developed through discussions on specific technical issues with a view to establishing joint R&D activities with educational institutions and venture companies.

Japanese companies have been making selections and concentrations to gain international competitive advantage. Meanwhile, it is likely that there are "idle" technology and human resources in areas that companies have abandoned because of business reorganization or other reasons; such idle resources may also be "buried" in regional small- and medium-sized, and venture companies²³⁰. Therefore, a new business model that helps combine such technology and human resources can be created to increase value added in Japan. Achieving this model will also expand Japan's growth frontier as a whole through the effective use of technology, people and other resources and the vitalization of small- and medium-sized, and venture companies. Indeed this would energize the entire financial and capital markets in Japan by attracting domestic and overseas funds. The integration of diverse technology and expertise will facilitate new innovation and contribute to solving global issues such as those of the environment, resources, food, and water²³¹.

In Japan, however, vertical divisions of organizations including "companies," "industries," and "educational institutions" persist, which would hamper the linking of technology and human resources. Combining technologies in wide-ranging sectors will require appropriate linking of knowledge and intelligence. In addition, a consistent strategy for the complete process of R&D to business development must be formulated in the technological fields in which Japan performs well to create a new business model for achieving the combination of technology and people from different areas ,and the business scale and the capital scale at a constant level are also necessary. Thus in Japan, "Innovation Network Corporation of Japan (tentative name)" must be established as a time-limited organization by assembling private knowledge and intelligence as a mechanism for facilitating the concentration of human resources and long-term funding to overcome these obstacles and develop a new business model (see Figure 2-4-83).

²³⁰ A sampling survey of individuals with patented inventions indicates that 40% of the patented inventions are not in use, and the reasons include "the project of the inventor's company in which the invention was planned to be used has been reduced or reorganized (21.7%)," "trends in technology and market have changed direction, thereby reducing the benefit of the invention (19.6%), "it is a fundamental invention and applied technology could not be developed from it (18.3%)" and "the new business of the inventor's company in which the invention was planned to be used has failed to succeed (12.8%)." (multiple choices) (The Research Institute of Economy, Trade and Industry "Innovation Process in Japan: Findings from the RIETI Inventors Survey", November 2007)

²³¹ Refer to Chapter 3 for the solutions to such global issues and innovation for the solutions.

Figure 2-4-83 Proposed organizational form of Innovation Network Corporation of Japan (tentative)



Source: Extracted from "INOBEESHON WO UMIDASU ARATANA SHIKUMI NO KOUCHIKU NI TSUITE" submitted by Akira Amari, a member of the Diet. The 14th Council on Economic and Fiscal Policy 2008.

(2) Considering the appropriate protection of technical information that becomes the basis of innovation

Another factor that hinders open innovation which would lead to new inventions through fusion with external technology beyond the vertical divisions of organizations may lie in the issue of protecting the information of the recipients.

Although participants in joint research projects generally exchange confidentiality agreements, their effectiveness may be questionable as the sanctions would not function in case of breach of contract. In other words, if participants who has received technical information don't protect and use the information appropriately, adequate fiduciary relationships do not develop among the participants, and inter-company strategic alliances based on the assumption of sharing publicly unknown technical information cannot be established. Because overlooking such a situation impedes the promotion of open innovation, measures to foster a trusting relationship as the basis of information sharing must be considered.

Case examples: Unstable foundation of information sharing that hinders open innovation (Case 1)

The companies participating in a research and development project were able to access Company A's trade secrets under strict confidentiality management by obtaining approval as part of the joint research in accordance with the procedures specified in their joint research agreement. Company B, however, violated the agreement by reproducing the trade secrets without following the specified procedures and obtaining the necessary approval. Although Company A considered bringing criminal charges against Company B for its malicious breach of contract, any unlawful use or disclosure of the trade secrets for the purpose of competition was difficult to prove, and thus Company A relinquished the idea of taking legal action against the counterpart.

(Case 2)

A confidentiality agreement has been signed with a manufacturing company as the trading partner in the particular business, and drawings and technical information were made available to this partner. Following this, however, another manufacturer proved to have been in possession of the same drawings. Since the trading partner was evidently breaching the confidentiality agreement, the company considered filing a lawsuit; however, sufficient proof of damage could not be presented and, in the end, the company was compelled to abandon the case without any litigation.

As for the acceptance of foreign workers as the basis for developing new strategies which has been discussed so far, due caution must be exercised because of the possibility of inevitably increasing the risk of disclosure of important technical information of Japanese companies to parties from outside the country. For this reason, institutional measures for appropriate protection of technical information will be needed.

In the future, therefore, the Ministry of Economy, Trade and Industry will discuss and determine the appropriate substantive and adjective laws for the prevention of theft, reproduction, and release of intellectual property of Japanese companies to a third party through wrongful means so as to provide adequate protection.

[Column 25] Overview of institutional measures for the protection of technical information in other countries

(The United States: the Economic Espionage Act)

The Economic Espionage Act is a federal criminal law that took effect in 1996 in response to the progress of computerization that had facilitated the theft of trade secrets without the committing of an act of physical violation.

It provides that whoever, intending or knowing that the offense will benefit any foreign government, steals, appropriates, or by fraud, obtains a trade secret and, without editorization, copies, duplicates or sends it shall be fined not more than 500 thousand US dollar or imprisoned for not more than 15 years, or both. Under the joint punishment provision, the organization to which the offender

belongs shall be fined not more than 10 million US dollar (§1831 Economic Espionage).

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The Economic Espionage Act is a federal criminal law that took effect in 1996 in response to the progress of computerization that had facilitated the theft of trade secrets without the committing of an act of physical violation.

It provides that whoever, intending or knowing that the offense will benefit any foreign government, steals, appropriates, or by fraud, obtains a trade secret and, without editorization, copies, duplicates or sends it shall be fined not more than 500 thousand US dollar or imprisoned for not more than 15 years, or both. Under the joint punishment provision, the organization to which the offender belongs shall be fined not more than 10 million US dollar (§1831 Economic Espionage).

In addition, whoever, with intent to convert a trade secret to the economic benefit of anyone other than the owner thereof and intending or knowing that the offense will injure any owner of that trade secret, steals, appropriates, or by fraud, obtains a trade secret and, without editorization, copies, duplicates or sends it shall be fined not more than 250 thousand US dollar or imprisoned for not more than ten years, or both. Under the joint punishment provision, the organization to which the offender belongs shall be fined not more than 5 million US dollar (§1832 Theft of Trade Secrets).

(Republic of Korea: Technology Leak Prevention and Industrial Technology Protection Act)

Industrial technologies offering high economic value and any overseas release of which may cause serious damage to the national security and economic development of the country are designated as "national critical technologies," and those who retain and/or manage such technologies are required to take protective measures for outflow prevention as well as to obtain export approval. In accordance with this law, the "Committee for the Protection of Industrial Technology" composed of relevant government departments and experts from the private sector (1) designates the national critical technologies; (2) develops the basic plan for the outflow prevention and protection of industrial technology; and (3) develops the guidelines for the protection of industrial technology.

The law prohibits the act of acquiring industrial technology through theft, threat and other unlawful means, the act of releasing industrial technology through unlawful means committed by an individual obligated to protect secrets, and the act of using, disclosing or making available to a third party the released industrial technology. In particular, whoever uses such technology overseas or acts for the purpose of overseas use shall be fined up to 70 thousand KRW or imprisoned for up to seven years, or both. Under the joint punishment provision, the organization to which the offender belongs shall be fined an equivalent amount.