Circumstances behind Growing Regional Disparities in Employment

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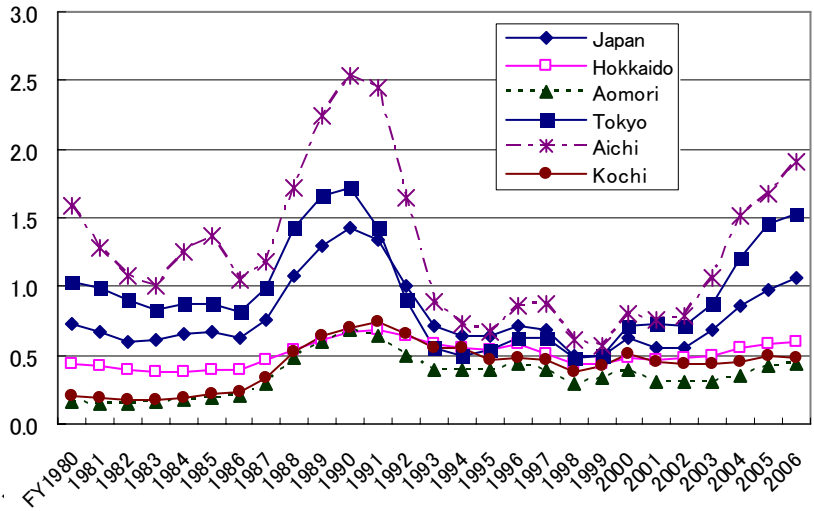
I. Regional Disparities in Employment

Regional disparities in the labor market are widening drastically. With economic recovery under way, the number of job offers has increased considerably in the Kanto and Tokai areas and the effective job offer-job seeker ratio is far above 1.0, indicating a labor shortage. In contrast, the number of job offers is not increasing to the same extent in Hokkaido, Tohoku, Shikoku and Kyushu areas, and in many prefectures within these areas, the effective job offer-job seeker ratio remains under 1.0. The latest figures demonstrate that the ratio is, in effect, falling in several prefectures.

The pace of economic recovery generally differs according to circumstances in the area. The business cycle in metropolitan areas such as Tokyo tends to rapidly influence the economy, whereas the influence is slower in local areas. Consequently, current regional disparities in employment merely reflect the classically diverse paces of economic recovery: significant improvement of the employment situation in local areas can be expected in the wake of a full-scale, prolonged economic recovery. It is clear, however, that the spread of economic recovery from major cities to local areas has slowed. In the past, employment in local areas would begin increasing after a time lag of approximately one year, although the present employment situation is not showing any remarkable improvement despite more than three years having passed since the employment upturn in Tokyo (Figure 1).

In the 1990s, the Japanese labor market went from bad to worse. The situation bottomed out in 1997 when Japan experienced a financial crisis. Subsequently, disparities in unemployment rate and the number of individuals employed in Tokyo, Hokkaido and other prefectures began to grow. Figure 2 illustrates the changes in unemployment rate between 1997 and 2006. During this period, the unemployment rate in Japan rose from 3.4% in 1997 to 5.4% in 2002 before falling to 4.1% in 2006. Unemployment in Tokyo, however, rose by only 0.1 percentage points during the 10 year period and there has been little change in the unemployment rate in Kanagawa, Chiba and Saitama Prefectures,

Figure 1. Changes in the effective job offer-job seeker ratio



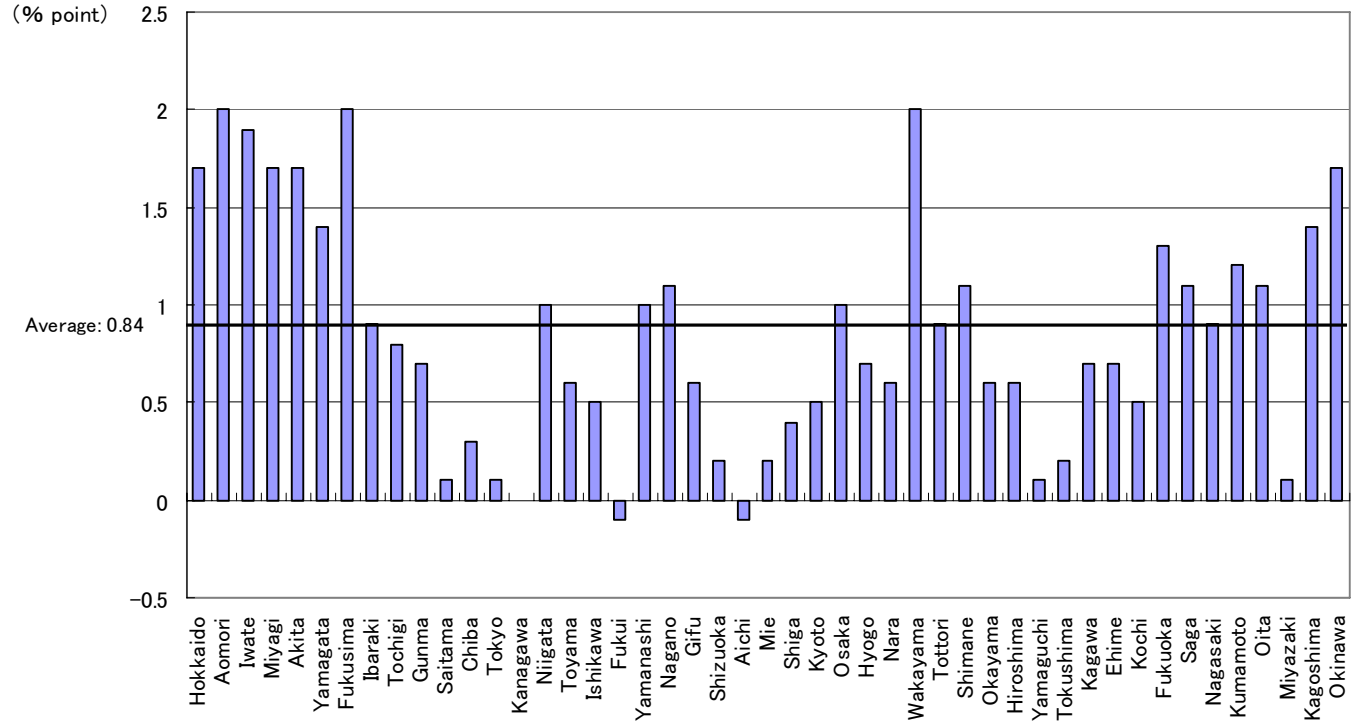
Source：Ministry of Health, Labour and Welfare, *Statistics of Public Employment Security Office* (on general job introduction).
Note：Including part-time work.

which are located in metropolitan areas. In Aichi Prefecture, the unemployment rate has improved over the previous decade, and in Shizuoka Prefecture, the rate rose by only 0.2 percentage points. In contrast, the unemployment rate increased considerably in Hokkaido, and all prefectures in Tohoku, Kansai and Kyushu areas, demonstrating that employment is worsening in local areas.

The rising unemployment rate in local areas can also be seen among changes in the number of employed individuals. Figure 3 illustrates changes in number of employed individuals from 1997 to 2006. According to the national average, the number of employed individuals decreased during this period by 4.2%. In contrast, the number of employed individuals in metropolitan areas remained virtually unchanged, even increasing slightly in some prefectures. In addition, the rate of decline in Aichi and Shizuoka Prefectures is below the national average. The decline in the number of employed individuals in all prefectures within Tohoku, Kansai, Shikoku and Kyushu areas is substantial and far below the national average.

In conjunction with the short-term factor of economic decline, there are also structural factors behind the declining employment situation in local areas.

Figure 2. Rise in unemployment rate by prefecture from 1997 to 2006



Source: Statistics Bureau of Ministry of Public Management, Home Affairs, Posts and Telecommunications (Ministry of Internal Affairs and Communications since 2004), *Labor Force Survey*.

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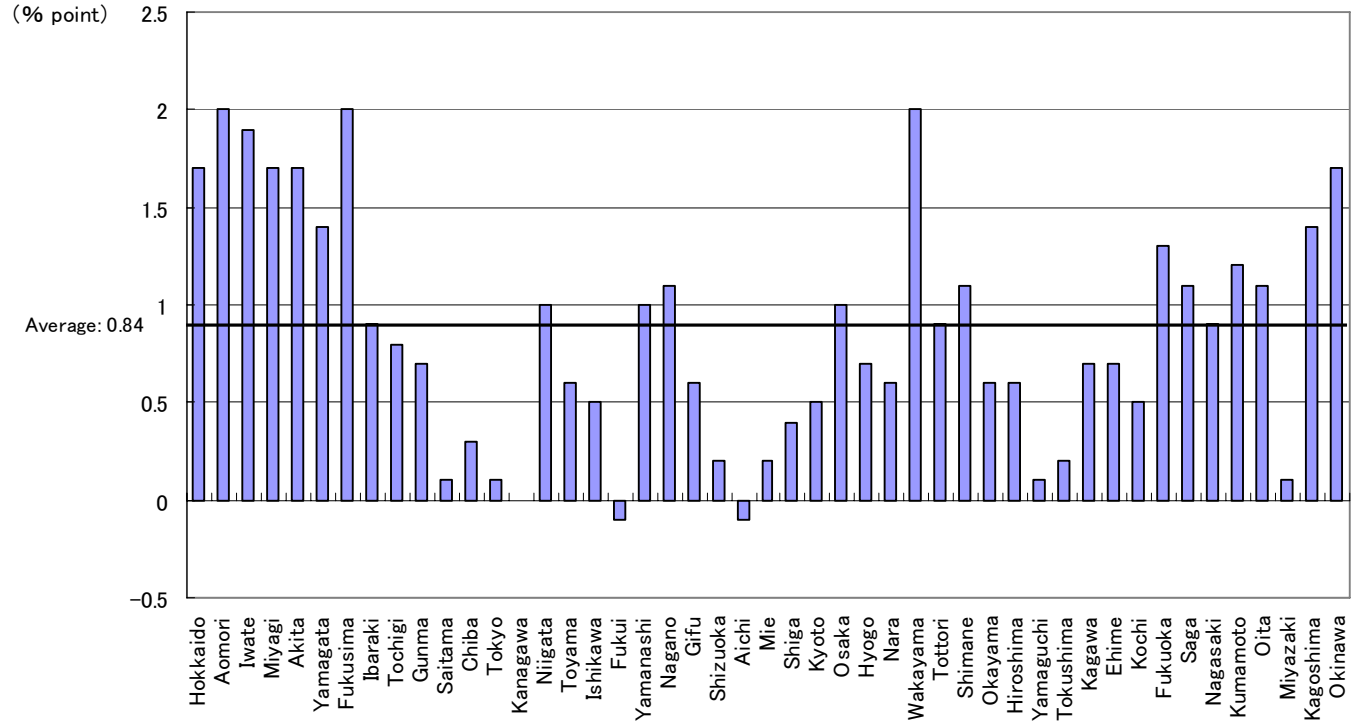

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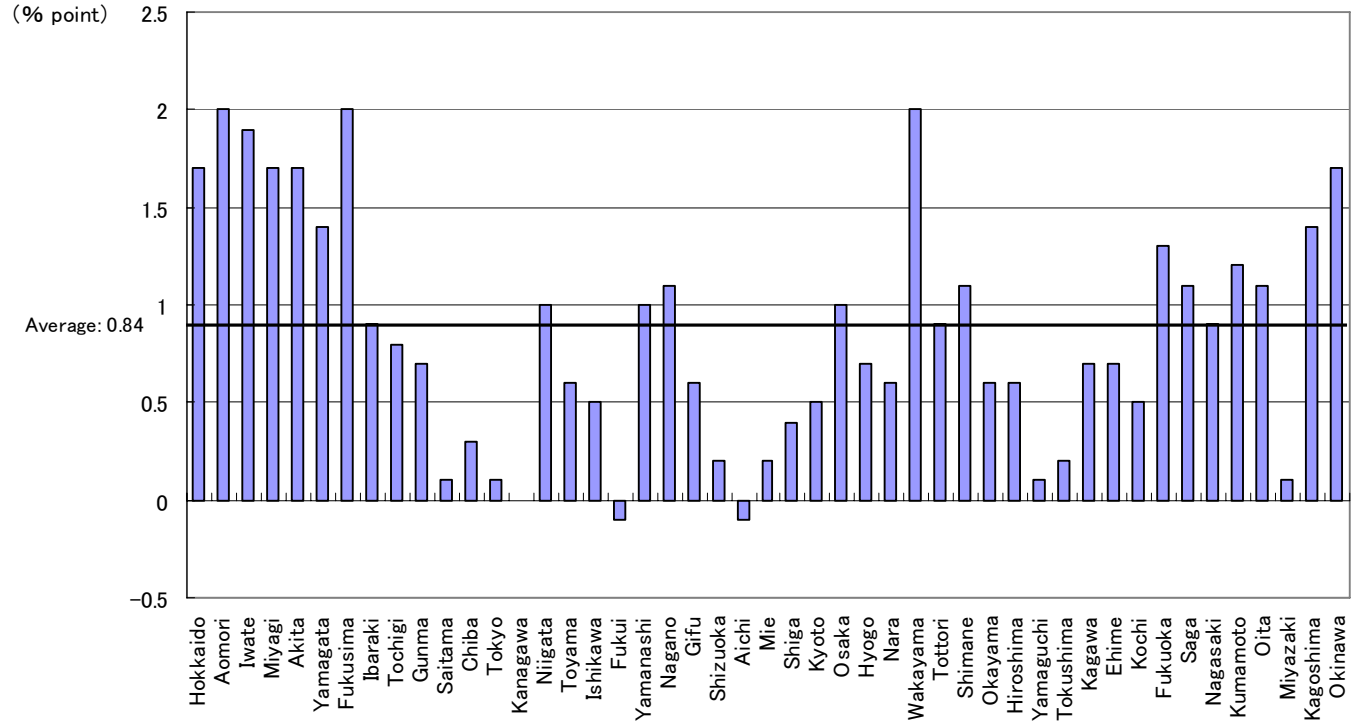
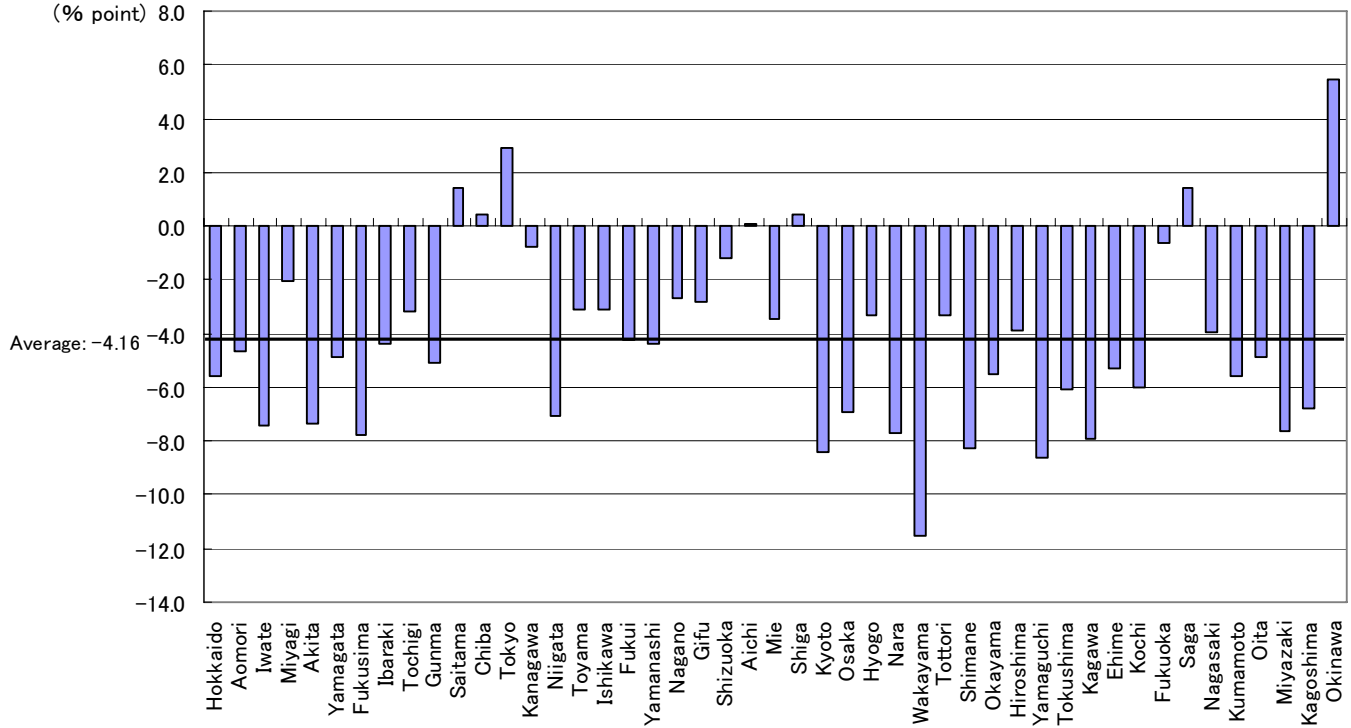


Source: Statistics Bureau of Ministry of Public Management, Home Affairs, Posts and Telecommunications (Ministry of Internal Affairs and Communications since 2004), *Labor Force Survey*.

Figure 3. Changes in the number of employed individuals by prefecture from 1997 to 2006



Source: Statistics Bureau of Ministry of Public Management, Home Affairs, Posts and Telecommunications (Ministry of Internal Affairs and Communications since 2004), *Labor Force Survey*.

For example, public investment is declining, economic globalization is growing, the birthrate is falling, and the proportion of elderly persons in society is increasing. These factors may cause structural changes in both the supply and demand of labor, thereby leading to wide regional disparities in employment. The following section lists several factors affecting the employment situation in local areas, analyzes the influence of these factors on the employment situation, and then examines the circumstances under which employment strategies specific to local areas are needed in Japan.

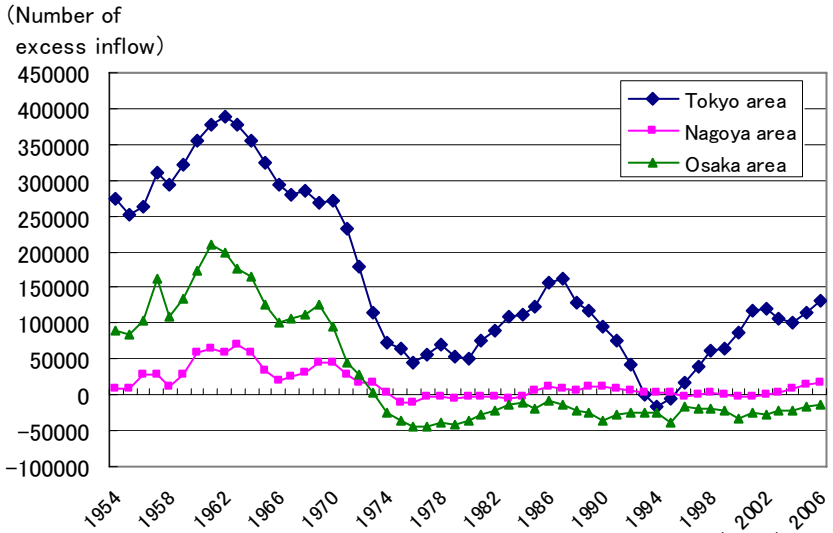
II. Changes in Intraregional Population Migration

Even with wide regional disparities in the number of employment opportunities, the employment situation will not be greatly influenced as long as population migration occurs in accordance with the change in the number of employment opportunities. Population migration in Japan, however, is actually decreasing significantly, thereby minimizing the task of narrowing the disparities in employment opportunity.

Figure 4 depicts the excess population inflow into major cities. The Tokyo area referred to in this paper includes Tokyo, Kanagawa Prefecture, Saitama Prefecture and Chiba Prefecture; the Nagoya area includes Aichi Prefecture, Gifu Prefecture and Mie Prefecture; and the Osaka area includes Osaka, Hyogo Prefecture, Kyoto Prefecture and Nara Prefecture. This figure reveals that until the occurrence of the so-called “Nixon Shock” in 1971, a large segment of the population migrated to Japan’s three major cities from local areas and filled any labor shortages in the major cities during Japan’s high-growth period. With subsequent economic slowdown and weak employment growth, the population inflow into major cities began decreasing, and in the Osaka area in particular, the population outflow continues steadily. On the other hand, in the Tokyo and Nagoya areas, as the economic growth rate rises amid business recovery, population inflow increases, but only to approximately one-third to one-fourth the excess inflow levels enjoyed during the peak of the high-growth period.

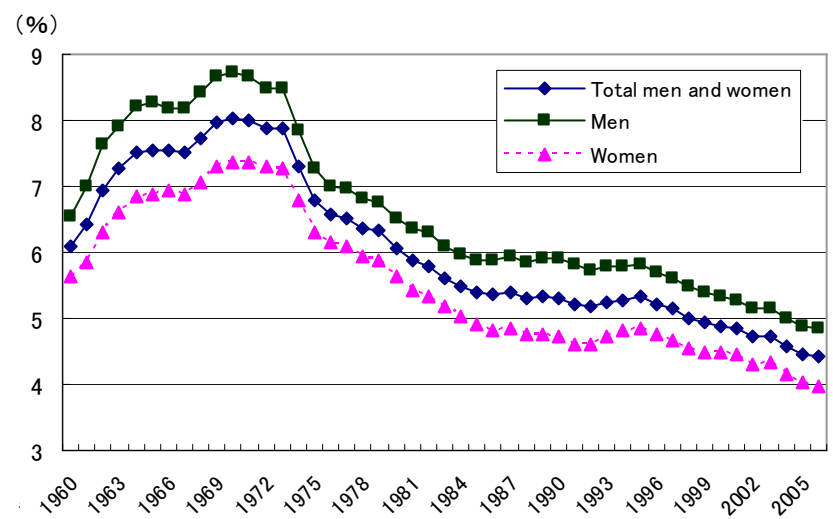
Figure 5 indicates that changes in the ratio of interregional population migration have declined significantly. There are two factors leading to this decline. One is the aging population, wherein the number of elderly persons with a lower migration rate has increased, thereby affecting an overall decline in migration rate. The second is the declining birth rate, which has led to the

Figure 4. Net excess population inflow into three major cities



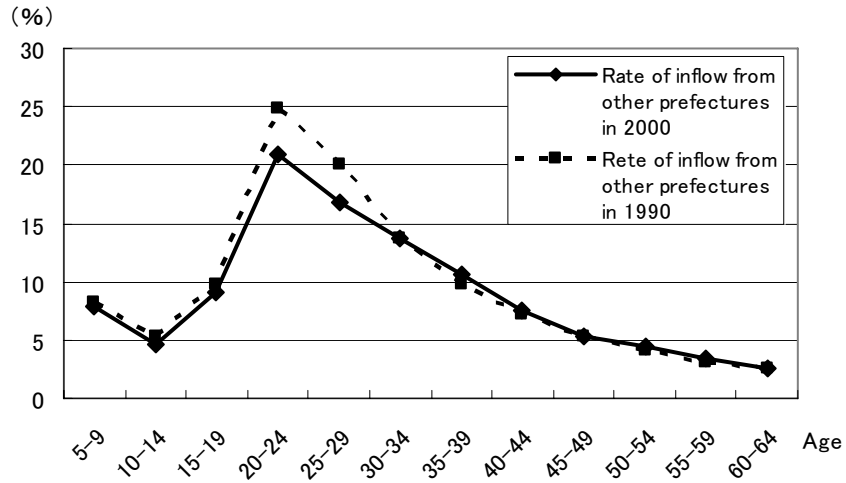
Source: Statistics Bureau of Ministry of Internal Affairs and Communications, *Report on Population Transfer in Basic Resident Register*.

Figure 5. Changes in the ratio of interregional population migrations



Source: Statistics Bureau of Ministry of Internal Affairs and Communications, *Report on Population Transfer in Basic Resident Register*.

Figure 6. Migration rate of men residing in a different prefecture five years ago



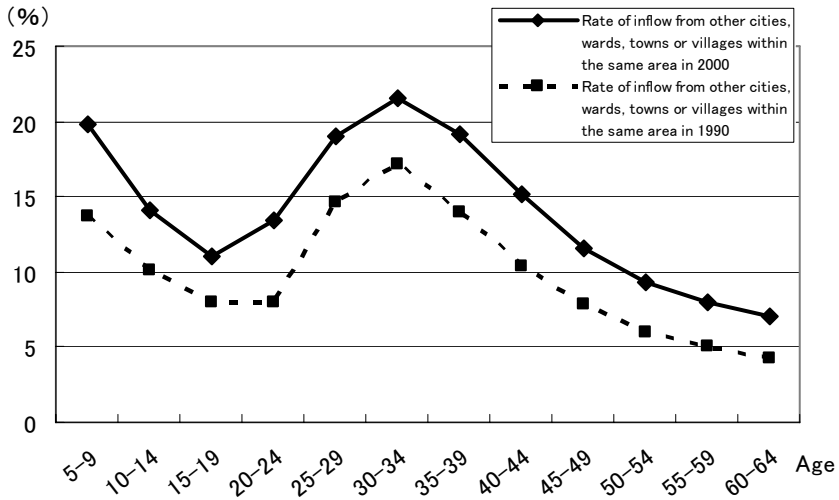
Source: Statistics Bureau of Ministry of Public Management, Home Affairs, Posts and Telecommunications, *National Census.*

one son or one daughter family; and the number of the young individuals migrating only a short distance from their hometowns has increased, causing a drop in the population migration rate.

Figure 6 shows the migration rate by age of persons permanently residing in a different prefecture five years ago. From this figure, it is clear that the migration rate between prefectures of persons aged 20 to 24 or 25 to 29 is still high, but the migration rate of such individuals during the five year period prior to 2000 is remarkably lower than the migration rate during the five year period prior to 1990. This implies that the rate of young persons staying in their hometowns is on the rise.

Figure 7 illustrates the migration rate of individuals who migrated within the same city, town or village. Compared to Figure 6, the age at the peak of the migration rate for these individuals increases to those aged 30 to 34. This is reflective of the fact that after marriage, individuals are moving out of their parents' homes, but in many cases, are remaining close to the city, town or village where they grew up. From this figure, it is clear that, in contrast with migration between prefectures, population migration within the same city, town or village was booming between 1990 and 2000.

Figure 7. Migration rate of men residing in a different location within the same city, town or village five years ago



Source: Statistics Bureau of Ministry of Public Management, Home Affairs, Posts and Telecommunications, *National Census.*

The decline in the population migration rate between regions indicates that it is becoming more difficult to narrow interregional disparities in the number of employment opportunities. Therefore, creating a balanced number of employment opportunities between regions should be stressed. However, from another point of view, the increasing number young persons expected to reside permanently in their hometowns signifies a greater opportunity to use their strength to revive these areas. Therefore, it can be said that the fundamentals for carrying out employment strategies using the power of youth are expanding based on a region being the nucleus.

III. Changes in the Government's Role in Regional Employment

As mentioned in the previous section, the creation of employment in each region has become increasingly more important since interregional population migration has decreased, reflecting a decline in the number of children and an increase in the number of elderly persons. What changes are occurring in labor demand in the various regions? This section is designed to consider the need

Table 1. Ratio of construction industry workers in each country (%)

	1980	1990	1999	2005
Japan	9.9	9.4	10.2	8.9
US	6.3	6.5	6.7	7.1
Canada	5.8	6.2	5.3	6.3
UK	6.5	8.0	7.0	7.9
Germany	8.0	6.6	8.9	6.6
France	8.6	7.0	5.6	5.9
Italy	10.0	8.8	7.7	8.6
Sweden	6.8	7.2	5.5	5.9
Korea	6.2	7.4	7.3	7.9
Australia	7.7	7.5	7.5	8.6

Source: OECD, *Labour Force Statistics.*

for new, unconventional employment policies by analyzing the impact of changes in the government's role in regional employment based on data from the 1990s.

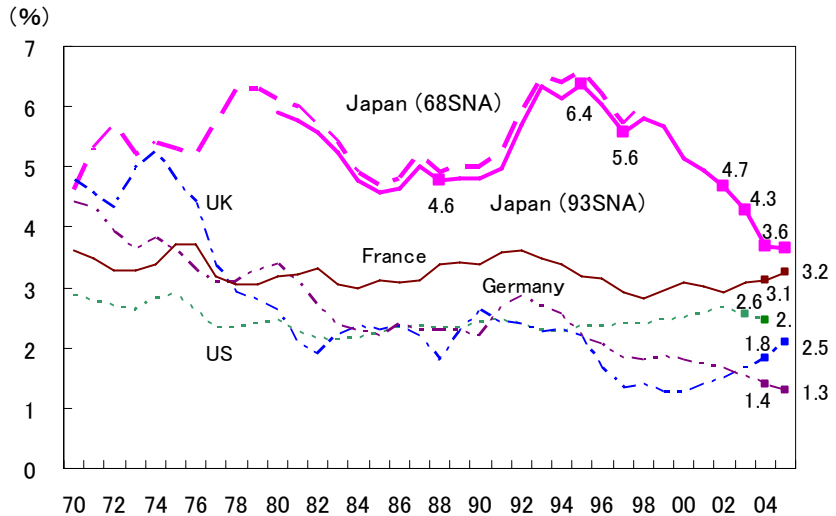
1. The Sum of Japan's Public Investment Compared to Other Countries

The composition ratio of construction industry workers to total industry workers in Japan is higher than that of other countries. Table 1 represents the composition ratios of construction industry workers in 21 countries with Japan's composition ratio being the highest among these countries.

This may be due to the fact that a considerable amount of money is poured into public investment in Japan. Demand in the construction industry comprises private investment (fixed capital formation in the private sector), including factory and housing construction, and government investment (government fixed capital formation), which is a form of public investment. Compared to other advanced nations, the ratio of government investment is particularly high in Japan. Figure 8 shows changes in the ratio of public investment to gross national product for each of five countries: the UK, the US, Germany, France and Japan. By examining figures from recent years, it is evident that Japan's public investment ratio is higher than the other four countries.

In the early 1970s, however, Japan's ratio was not so high. The ratio was above 4% in the UK and Germany, and higher than 3.5% in France. Only in the case of the US did the public investment ratio of federal and other local governments, including state and county governments, remain low. In the UK

Figure 8. Changes in the ratio of public investment to gross national product for the UK, the US, Germany, France and Japan



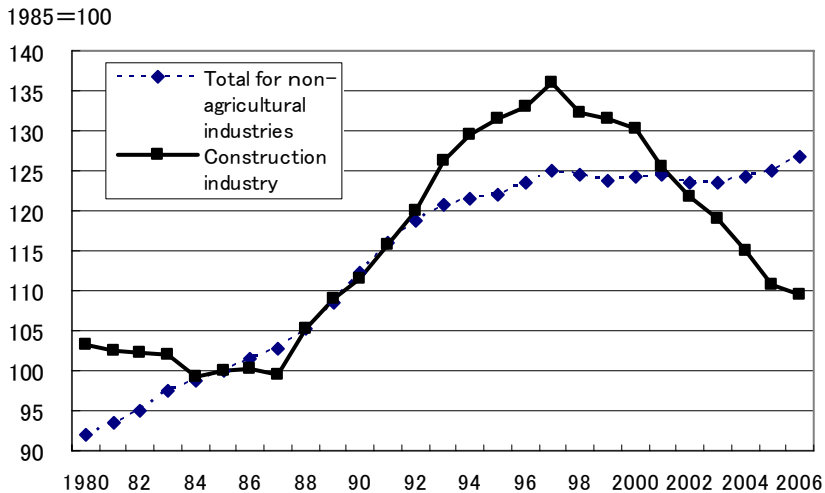
Sources: Cabinet Office, Government of Japan, *Annual Report on National Economic Accounting* (on a fiscal year basis) for Japan. OECD, *National Accounts 2000* for the UK, the US, Germany and France.

Note: Figures for Germany prior to 1990 were obtained from former West Germany. Public works expenditure indicates gross fixed capital formation based on general government expenditure.

and Germany, however, where until the early 1970s there was a high ratio of public investment, the ratio declined from the latter half of the 1970s until the 1980s, when only Japan's high level figure was remarkable.

As previously mentioned, the decline in the public investment ratio in European countries was the result of great concern over a drop in effective economic recovery caused by an increase in public investment expenditures, and the harmful influence this was having. Throughout the latter half of the 1980s, during the bubble economy in Japan, there was an increase in demand in the private sector, while the public investment ratio temporarily declined during the period of economic overheating. Nevertheless, the ratio was maintained at a higher level than other advanced nations due to their understanding that social capital had not yet sufficiently improved. Moreover, after the bubble economy burst, the ratio continued to rise as Japan moved into the 1990's. In 1995, however, the ratio fell slightly under strong demand for

Figure 9. Changes in the number of employees in non-agricultural and construction industries based on the year 1985 (number of employees=100)



Source: Statistics Bureau of Ministry of Internal Affairs and Communications, *Annual Report on Labor Force Survey*.

fiscal reconstruction.

Figure 9 indicates changes in the number of employees in non-agricultural and construction industries with 1985 as the base year when the number of employees totaled 100. By looking at this figure alongside the trend in Japan's public investment ratio as shown in Figure 7, it is clear that an increase or decreases in the number of construction industry employees is fully linked to trends in public investment. Only in the latter half of the 1980s did the number of employees in the construction industry increase, reflecting a rise in plant and equipment investment as well as housing investment in the private sector. With exception to this case, however, the number of construction industry employees follows trends in public investment after a time lag of two years.

For example, in the first half of the 1980s, the ratio of public investment declined as did the number of employees in the construction industry. In the latter half of the 1980s, the number of employees in the construction industry rose, and following the burst of the bubble economy in the 1990s, the government expanded the public investment budget to stimulate economic activity. As a

result, the number of employees in the construction industry alone continued increasing, while the number of employees in non-agricultural industries on the whole declined considerably. During and subsequent to 1996, cutbacks in public investment began to allow for fiscal reconstruction, and the number of employees in the construction industry began dropping accordingly after peaking in 1997.

2. Increased Dependence on Public Investment for Creation of Employment in Local Areas

What percentage of employment in each prefecture was created through public investment? The expansion of public investment contributes to increasing demand for construction, resulting in greater demand for the raw materials used therein. This also leads to an increase in labor demand in these industries as well as the expansion of consumer spending in local areas from an increase in individual income. Ultimately there is a rise in local employment opportunities in retail and manufacturing. Bearing in mind these effects, what percentage of employment in each prefecture is created by public investment by the government and municipalities? The dependence of employment on public investment in each prefecture was estimated using an inter-industry relations table (non-competing inter-industry relations table plotting migration due to desire to change prefectures and cases of transfer overseas) prepared by each prefecture and various statistics including wage and consumption statistics (for details refer to [Higuchi et al. 2002]).

The above is illustrated in Table 2. Looking at this table, it is clear that the prefectural average ratio of employment created by public investment, including direct and indirect effects, was 8.5% based on data from 47 prefectures collected in 1990. This ratio subsequently rose to 11.0% in 1999, indicating an increase in dependence on public investment by 2.5 percentage points during the 10 year period. Classifying prefectures by their location within either a major city or local area reveals that the ratio in major cities increased 1.6 percentage points to 8.2% in 1999, up from 6.6% in 1990. However, in local areas with greater dependence on public investment, the ratio rose by 3.5 percentage points to 13.8% in 1999, up from 10.3% in 1990.

By looking at these figures in the various prefectures, it is clear that Okinawa Prefecture had the highest ratio of employment created by public investment in 1999. In this prefecture, 23.3% of all employment opportunities

Table 2. Per prefecture ratio of employment created by public investment to total employment

Prefecture/area	1985 (%)	1990 (%)	1995 (%)	1999 (%)	1990 - 1999 (% points)
Hokkaido	17.5	16.8	20.6	20.9	4.1
Aomori	14.7	11.2	15.2	15.6	4.4
Iwate	10.9	10.3	13.6	14.0	3.6
Miyagi	10.0	9.5	12.3	12.7	3.2
Akita	12.6	13.5	18.2	18.0	4.4
Yamagata	10.0	10.2	14.1	14.4	4.1
Fukushima	8.9	8.0	10.8	11.5	3.5
Niigata	11.6	10.9	14.8	15.2	4.3
Ibaraki	6.9	7.6	10.7	10.9	3.3
Tochigi	—	5.7	8.2	8.4	2.7
Gunma	—	5.9	8.6	8.8	2.9
Saitama	6.3	6.3	8.5	8.7	2.4
Chiba	8.4	7.8	9.9	8.3	0.5
Tokyo	5.7	5.6	7.6	7.2	1.5
Kanagawa	7.6	5.9	8.1	7.2	1.3
Yamanashi	8.8	7.4	12.2	11.5	4.2
Nagano	9.0	7.8	11.1	8.7	1.0
Shizuoka	6.2	5.4	7.4	7.2	1.8
Toyama	9.2	8.4	12.8	13.9	5.5
Ishikawa	9.7	8.0	13.0	13.9	5.9
Gifu	7.9	7.5	10.2	10.7	3.2
Aichi	6.2	6.2	8.2	7.8	1.7
Mie	7.6	7.4	9.7	9.6	2.2
Fukui	10.8	11.8	11.7	12.1	0.3
Shiga	—	5.9	7.5	7.2	1.3
Kyoto	7.4	8.1	10.9	9.9	1.8
Osaka	6.2	7.1	9.9	8.5	1.4
Hyogo	7.7	7.9	11.8	9.2	1.2
Nara	10.4	9.7	11.2	10.3	0.7
Wakayama	8.8	8.5	13.4	16.3	7.8
Tottori	—	11.3	15.7	17.0	5.6
Shimane	15.9	14.8	17.4	21.2	6.4
Okayama	10.3	9.0	14.0	13.8	4.8
Hiroshima	8.6	9.1	11.9	12.2	3.1
Yamaguchi	10.4	11.4	13.7	15.3	3.9
Tokushima	12.1	12.5	16.4	17.1	4.7
Kagawa	11.9	8.2	10.2	10.6	2.5
Ehime	9.8	10.8	13.8	14.1	3.4
Kochi	14.2	15.0	19.4	22.2	7.2
Fukuoka	11.0	9.1	11.4	12.2	3.0
Saga	11.8	12.5	16.0	15.5	3.0
Nagasaki	12.5	17.4	16.8	16.4	-1.0
Kumamoto	12.0	12.2	16.1	15.0	2.8
Oita	11.8	11.4	15.3	14.2	2.8
Miyazaki	13.4	13.0	18.3	18.8	5.8
Kagoshima	13.3	13.1	17.7	18.1	5.0
Okinawa	20.9	18.1	22.8	23.3	5.2
Japan	8.9	8.5	11.3	11.0	2.5
City areas	6.7	6.6	9.0	8.2	1.6
Tokyo area	6.5	6.1	8.2	7.6	1.5
Nagoya area	6.8	6.6	8.8	8.6	2.0
Osaka area	7.0	7.6	10.6	9.0	1.4
Local areas	11.3	10.3	13.6	13.8	3.5

were created by public investment, including employment created indirectly. Okinawa was followed by Kochi Prefecture, Shimane Prefecture and Hokkaido. In these areas, there is a high degree of dependence on public investment, and more than 20% of all employment, including self-employment such as persons engaged in agriculture, is created by public investment. The dependence on public investment in each these prefectures grew over the previous 10 years. Okinawa Prefecture showed an increase of 5.2 percentage points, 7.2 points in Kochi Prefecture, 6.4 points in Shimane Prefecture and 4.1 points in Hokkaido. In these prefectures, the dependence on public investment for the creation of employment grew well above the national average of 2.5 points due to the expansion of public investment in local areas.

3. Expansion of Social Capital Is Not Linked to the Improvement of Local Economies

Another reason public investment was curtailed is the belief that increasing public investment cannot be linked to the improvement of economic efficiency in local areas. What an expansion of public investment does is contribute to an increase in social capital. Social capital is divided between capital for daily necessities, including sewage and water supply, public housing and park construction, and industry-related capital for roads, harbors and airports. When industry-related social capital, in particular, is increased, economic efficiency is expected to improve, thereby strengthening the competitiveness of enterprises in the area. For example, if a highway is constructed that clears away a traffic jam, individuals spend less time on the road in pursuit of their destination. Productivity within a set working period is also likely to increase. How much does the expansion of public investment contribute to the improvement of economic efficiency in each prefecture, and how has this changed over time?

Economic efficiency in each prefecture can be estimated by subtracting input spent on expenses including the cost of labor, capital and raw materials, from total production, namely output in each respective prefecture. In economics, this is referred to as Total Factor Productivity. Conventionally, labor productivity was used as an index to show production efficiency, but when capital investment increases and the per capita capital-labor ratio rises, labor productivity rises accordingly. However, the rise in labor productivity is primarily a result of capital investment, which does not always reflect an improvement in economic efficiency. Recently, in place of labor productivity, Total Factor Productivity

(the difference after subtracting any increase in capital) is used as an index for demonstrating economic efficiency. Accordingly, the Total Factor Productivity was estimated for each prefecture using regression analysis of the percentage of Total Factor Productivity increase due to a one million yen rise in social capital (for details refer to [Higuchi et al. [2002]).

Figure 10 shows the results of a simulation based on the percentage of improvement in economic efficiency in each prefecture in 1975, should social capital have increased by one million yen. It is clear that additional investment of social capital would have caused great improvement in economic efficiency in major cities, and little improvement in local areas.

Figure 11 shows the extent of improvement in 1998. For comparison purposes, the measure of scale marked on the axis is the same as in Figure 10, which illustrates the degree of improvement in 1975. Comparing both figures, it is clear that the degree of improvement in 1998 is considerably less than in 1975, achieving only half of 1975 levels in most prefectures. Such a decline can be estimated and observed by focusing on the industry-related capital within total social capital.

In the past, the economic efficiency of an area greatly improved and provided corporations with a greater competitive edge when social capital was expanded by implementing public investment. However, in recent years, social capital has, to some degree improved, and now the economic efficiency of an area cannot be expected to increase to the same extent as before, even in view of new public investment.

This change indicates a transformation in the aim of public investment in light of an increase in dependency on public investment for the creation of employment. In the past, public investment was instituted first for the purpose of improving economic efficiency in an area. In other words, the purpose of public investment was to use a new road constructed through public investment. However, in recent years, the concept of this purpose has deteriorated and been replaced with the goal of creating employment through public investment. In this sense, the construction of the road itself has become the objective of public investment.

If social capital is created and is useful for future generations, they will benefit from it, and therefore younger generations should share in the repayment of government bonds. However, if social capital is created and is unnecessary for future generations, one cannot justify obligating them to bear

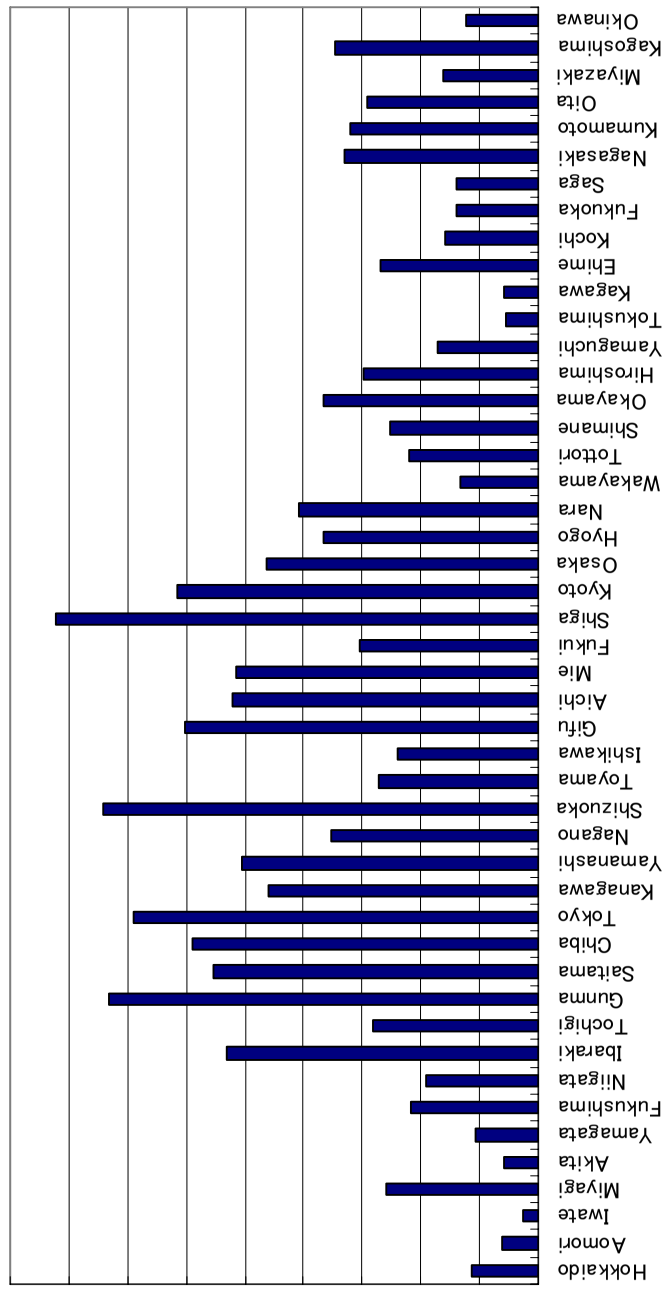
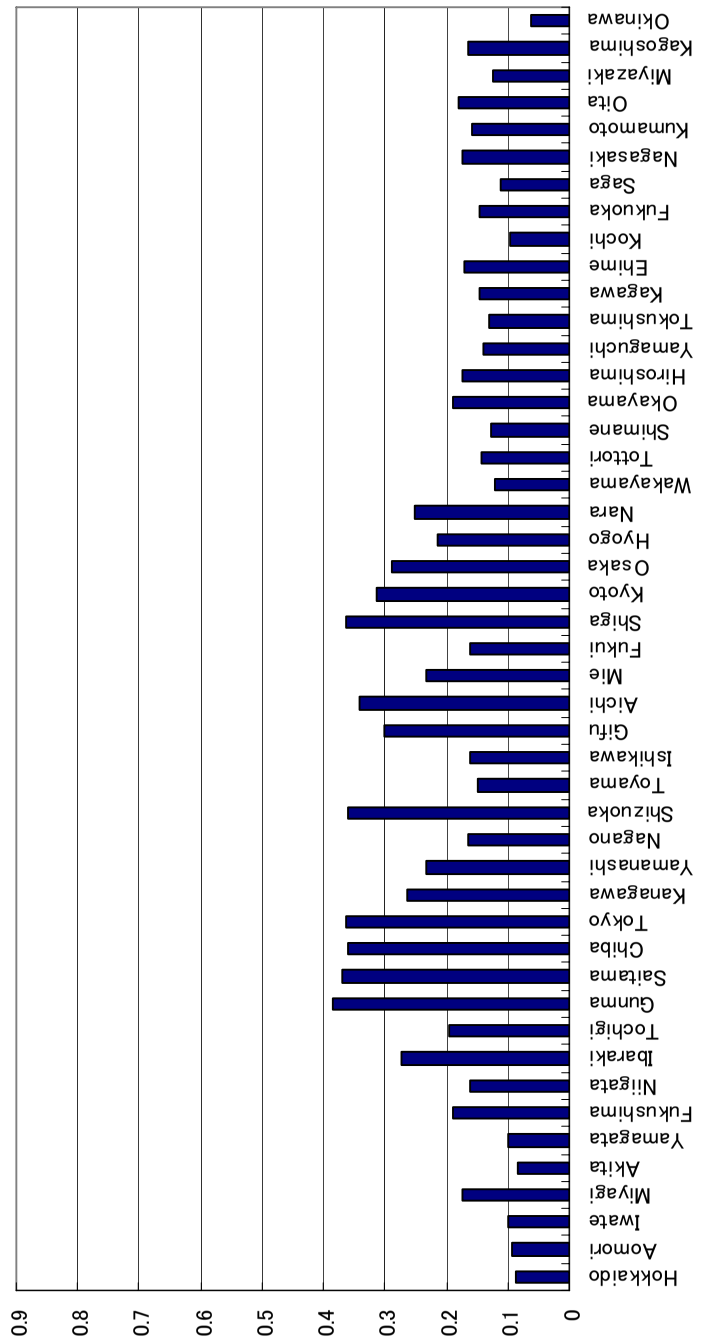


Figure 10. Per prefecture increase in 1975 TFP rate due to social capital expansion (one million yen per capita, real)

Figure 11. Per prefecture increase in 1998 TFP rate due to social capital expansion (one million yen per capita, real)



these expenses. In this case, measures for creating employment opportunities by increasing public investment and reducing unemployment should no longer be taken. It is, therefore, important to address what manner of framework should be developed in place of public investment.

4. Per Prefecture Ratio of Employment Created by Pension Benefits

In addition to public investment, many employment opportunities are created by the government. When rice prices were fixed by the government, an unusual phenomenon occurred wherein a producer's prices rose higher than those of a consumer, causing a form of income transfer from the place of consumption to the place of production. Accordingly, individuals engaged in agriculture were given opportunities to receive income, narrowing regional disparities. At present, the view is that these disparities will be narrowed through public investment and social security benefits.

In an area with a large elderly population, more pension benefits are paid than insurance premiums. Individuals receive pension benefits and engage in consumption, which causes an increase in demand in the region. Not all of these consumers consistently purchase goods from retailers within their region. Even if they were to do so, in many cases there is still a greater demand for goods produced in other areas, eliminating any expansion of demand within their region. With the exception of these cases, to what extent will pension benefits contribute to an increased demand for products and services within one's region; and to what extent will these benefits help create employment opportunities therein? The effects of pension benefits and unemployment benefits are estimated for each prefecture based on an inter-industry relations table.

Table 3 demonstrates the results. The national average in 1999 was 2.9% of total employment, or 1.9 million jobs created by pension and unemployment benefits. According to prefecture, Yamaguchi Prefecture boasts the highest ratio at 4.9%, followed by Kochi Prefecture, Shimane Prefecture and Kumamoto Prefecture. For Tokyo, the ratio is a low 1.6%. There is not as much variation in these ratios as in the ratio of pensioners to population. The reason may be that in local areas the number of self-employed individuals is higher than that of employers and thus the number of Employees' Pension Insurance subscribers receiving large benefits is small, or perhaps the pension benefits per person are lower, since pension benefits are linked to insurance premiums based on salary.

Table 3. Per prefecture ratio of employment created by government activity to total employment

Prefecture/area	1985 (%)	1990 (%)	1995 (%)	1999 (%)	1990－1999 (% points)
Hokkaido	2.9	2.9	3.1	4.0	1.1
Aomori	2.7	2.1	2.1	2.6	0.5
Iwate	1.9	2.0	2.3	3.0	1.1
Miyagi	1.6	1.6	2.0	2.8	1.1
Akita	2.5	2.7	3.1	3.9	1.2
Yamagata	2.1	2.1	2.5	3.1	1.0
Fukushima	2.1	1.8	1.9	2.5	0.6
Niigata	2.6	2.6	2.9	3.7	1.1
Ibaraki	1.2	1.4	1.7	2.2	0.9
Tochigi	－	1.3	1.6	2.0	0.7
Gunma	－	1.5	1.8	2.3	0.8
Saitama	1.4	1.4	2.0	2.8	1.4
Chiba	1.6	1.5	1.8	2.5	1.0
Tokyo	1.0	0.9	1.3	1.6	0.7
Kanagawa	1.5	1.4	2.1	2.8	1.4
Yamanashi	1.6	1.5	1.8	2.3	0.8
Nagano	1.8	1.7	1.9	2.5	0.8
Shizuoka	1.7	1.6	1.9	2.5	0.9
Toyama	2.3	2.3	3.1	3.9	1.6
Ishikawa	2.2	2.0	2.6	3.3	1.3
Gifu	1.9	1.8	2.3	2.9	1.1
Aichi	1.5	1.6	2.0	2.5	1.0
Mie	1.8	1.7	2.1	2.6	0.9
Fukui	2.1	2.0	2.8	3.5	1.5
Shiga	－	1.5	1.9	2.4	0.9
Kyoto	2.0	2.3	2.4	3.1	0.8
Osaka	1.5	1.8	2.3	2.9	1.1
Hyogo	2.1	2.1	2.7	3.3	1.2
Nara	2.2	2.3	2.8	3.7	1.4
Wakayama	2.3	2.3	2.9	3.5	1.3
Tottori	－	2.5	3.1	4.0	1.4
Shimane	2.6	3.0	3.4	4.2	1.2
Okayama	2.2	2.5	3.2	4.1	1.6
Hiroshima	2.3	2.4	2.9	3.7	1.3
Yamaguchi	2.8	3.6	3.9	4.9	1.3
Tokushima	2.4	2.7	3.0	3.7	1.0
Kagawa	2.3	2.2	2.3	2.9	0.8
Ehime	2.6	2.8	3.5	4.2	1.4
Kochi	2.9	3.2	3.8	4.6	1.4
Fukuoka	2.8	2.8	2.8	3.5	0.7
Saga	2.4	2.6	2.8	3.5	0.8
Nagasaki	2.8	2.9	3.2	3.8	0.9
Kumamoto	2.7	2.8	3.4	4.2	1.5
Oita	2.2	2.4	2.8	3.5	1.1
Miyazaki	2.6	2.8	3.1	3.9	1.1
Kagoshima	2.7	2.8	3.2	3.9	1.1
Okinawa	1.9	2.0	2.4	3.0	1.1
Japan	1.9	1.9	2.3	2.9	1.0
City areas	1.4	1.5	1.9	2.5	1.0
Tokyo area	1.2	1.1	1.6	2.2	1.0
Nagoya area	1.6	1.6	2.1	2.6	1.0
Osaka area	1.8	2.0	2.4	3.1	1.1
Local areas	2.3	2.3	2.6	3.3	1.0

However, there are many employment opportunities created by pension and unemployment benefits in local areas, raising the ratio of employment creation by more than 1 point over the previous 10 years. If pension benefits are reduced in the future, the local economy may be affected by a decline in demand and employment amid the rapid growth of the elderly population.

5. Per Prefecture Ratio of Government Employment

Another form employment created by the government in local economies is civil service. In 2000, the number of government employees was approximately 0.8 million and the number of local government employees was 3.2 million, accounting for 6.2% of total employment. Looking at the number of government employees per 1,000 persons in foreign countries reveals 104 government employees in France, 83 in the UK, 80 in the US and 68 in Germany. In Japan, however, there are only 40 government employees per 1,000 persons, which is relatively small in comparison. However, in some countries, a certain degree of business is consigned to the private sector or a foundation, and it is not clear whether the number of associate government employees working in public corporations is included in the number of government employees. For these reasons, these figures alone do not clarify whether the number of individuals engaged in public service is actually smaller in Japan.

Let us take a look at the figures by prefecture. Government employees receive salaries and then engage in consumption, resulting in the creation of employment opportunities in a prefecture. What percentage of the total number of employment in an area is created by government employment? Table 4 shows the results of this estimation.

By and large in Japan, 8.7% of total employment was created by government employment in 1999 including the repercussion effect. By looking at individual prefectures, Hokkaido ranks highest with a ratio of 12.6%, followed by Shimane Prefecture, Okinawa Prefecture, Aomori Prefecture and Kochi Prefecture, each with ratios above 12%. The number of government employees was trending upward until 1994, after which time the prescribed number of employees was reduced due to financial difficulties. As a result, dependency on government employment for the creation of jobs, including the effects of said employment has remained virtually unchanged since 1990.

Table 4. Per prefecture ratio of employment created by government activity to total employment (ratio of public employees)

Prefecture/area	1985 (%)	1990 (%)	1995 (%)	1999 (%)	1990－1999 (% points)
Hokkaido	13.1	12.8	12.4	12.6	-0.2
Aomori	12.2	12.3	12.1	12.0	-0.3
Iwate	9.9	10.3	10.2	10.4	0.2
Miyagi	10.3	9.9	9.8	9.9	-0.1
Akita	10.5	10.3	10.3	10.7	0.4
Yamagata	9.4	9.5	10.0	10.1	0.5
Fukushima	8.4	8.3	8.3	8.7	0.3
Niigata	8.8	8.8	8.8	9.1	0.3
Ibaraki	8.8	8.6	8.6	8.6	0.1
Tochigi	－	7.3	7.2	7.2	-0.1
Gunma	－	7.8	8.0	7.9	0.2
Saitama	8.3	7.7	7.8	7.8	0.1
Chiba	10.0	9.2	9.1	8.9	-0.3
Tokyo	7.3	6.7	6.8	6.7	0.1
Kanagawa	8.7	8.0	7.9	7.7	-0.3
Yamanashi	9.2	9.1	9.2	9.3	0.2
Nagano	7.9	8.0	8.2	8.3	0.3
Shizuoka	7.0	6.9	6.9	7.0	0.1
Toyama	8.6	8.4	8.2	8.4	0.1
Ishikawa	9.3	9.0	9.1	9.5	0.5
Gifu	8.1	7.9	8.4	8.6	0.7
Aichi	7.1	6.9	6.7	6.8	-0.1
Mie	8.9	8.8	8.8	9.0	0.2
Fukui	8.7	8.7	9.1	9.4	0.6
Shiga	－	9.4	9.3	9.1	-0.3
Kyoto	9.1	8.8	8.8	9.1	0.3
Osaka	7.0	6.6	6.6	6.8	0.2
Hyogo	9.4	9.1	9.1	9.2	0.1
Nara	11.7	11.9	11.5	11.5	-0.4
Wakayama	10.1	10.0	10.1	10.8	0.8
Tottori	－	10.3	10.7	11.2	0.9
Shimane	10.6	10.9	11.4	12.1	1.2
Okayama	8.6	8.4	8.6	8.9	0.5
Hiroshima	9.3	9.1	9.3	9.6	0.4
Yamaguchi	10.0	10.0	10.1	10.6	0.6
Tokushima	10.6	11.2	11.4	11.9	0.7
Kagawa	9.9	9.9	9.8	10.1	0.2
Ehime	8.8	8.8	9.2	9.5	0.7
Kochi	11.7	11.5	11.6	12.0	0.6
Fukuoka	9.6	8.7	8.5	8.4	-0.3
Saga	10.3	10.5	10.5	10.5	0.0
Nagasaki	11.5	11.2	11.5	11.7	0.4
Kumamoto	10.1	10.1	10.0	10.2	0.1
Oita	10.6	10.4	10.4	10.5	0.1
Miyazaki	10.2	10.0	9.8	10.0	0.1
Kagoshima	11.0	11.2	11.1	11.2	0.1
Okinawa	13.5	13.4	13.3	12.1	-1.4
Japan	8.9	8.6	8.6	8.7	0.1
City areas	8.0	7.5	7.6	7.6	0.1
Tokyo area	8.1	7.4	7.5	7.4	0.0
Nagoya area	7.6	7.4	7.4	7.5	0.1
Osaka area	8.2	7.9	7.8	8.0	0.2
Local areas	9.9	9.6	9.6	9.7	0.1

6. Increasing Dependency on Government Employment in Local Areas

Employment opportunities created by the government have been examined by introducing public investment, social security and government employment, including the effects thereof. Combining these factors, what percentage of total employment in each prefecture was created by the government? Table 5 is a combination of the three tables.

According to the national average in Japan, 18.9% of total employment was created by the government in 1990, with the ratio rising to 22.5% in 1999. Looking at the figures for each prefecture reveals that several prefectures are highly dependent on the government. Kochi Prefecture is one such example. In Kochi Prefecture, the ratio rose by 9.2% points during the charted period, reaching a record high of 38.9% in 1999. That is, nearly 40% of total employment, including those self-employed, such as persons engaged in agriculture, was created through government expenditure, followed by 38.4% in Okinawa Prefecture, and 37.5% in both Shimane Prefecture and Hokkaido. As many as 7 out of 12 prefectures including Hokkaido have ratios exceeding 30%.

What will happen in the future should fiscal spending be cut due to financial difficulty? Let us examine this with the assumption that fiscal spending is cut uniformly throughout Japan by 10%. In Kochi Prefecture, 3.89% of total employment would be lost. In Kochi Prefecture, the unemployment rate in 2004 was 6.1%; hence the total unemployment rate would rise to 10.0% if all workers were to lose their jobs and become unemployed. In Hokkaido, the current unemployment rate of 5.8% would rise to 9.6% and in Okinawa Prefecture it could be expected to rise from 7.6% to 11.5%.

In light of central and local governments' outstanding per capita liabilities amounting to 5.38 million yen, tackling fiscal reconstruction is of obvious importance. How can local employment be managed? Now that Japan can no longer depend on the government for the creation of employment in local areas, a new framework must be established.

Table 5. Per prefecture ratio of employment created by government activity to total employment (employment created by public employees, public works and unemployment insurance benefits)

Prefecture/area	1985 (%)	1990 (%)	1995 (%)	1999 (%)	1990－1999 (% points)
Hokkaido	33.5	32.6	36.1	37.5	4.9
Aomori	29.6	25.6	29.5	30.3	4.6
Iwate	22.8	22.6	26.1	27.4	4.8
Miyagi	21.8	21.1	24.2	25.3	4.2
Akita	25.6	26.5	31.6	32.6	6.0
Yamagata	21.4	21.8	26.5	27.5	5.7
Fukushima	19.3	18.1	21.0	22.6	4.5
Niigata	23.1	22.3	26.4	28.0	5.7
Ibaraki	17.0	17.5	21.0	21.7	4.2
Tochigi	—	14.3	16.9	17.6	3.3
Gunma	—	15.1	18.4	19.0	3.9
Saitama	16.0	15.4	18.3	19.3	3.9
Chiba	20.0	18.5	20.7	19.7	1.2
Tokyo	14.0	13.2	15.7	15.6	2.4
Kanagawa	17.8	15.3	18.2	17.7	2.4
Yamanashi	19.7	18.0	23.3	23.1	5.1
Nagano	18.6	17.5	21.3	19.5	2.0
Shizuoka	14.9	13.9	16.2	16.6	2.7
Toyama	20.1	19.0	24.1	26.2	7.1
Ishikawa	21.2	19.0	24.7	26.7	7.7
Gifu	17.9	17.2	20.9	22.2	5.0
Aichi	14.8	14.6	16.9	17.2	2.6
Mie	18.3	18.0	20.6	21.3	3.3
Fukui	21.6	22.5	23.6	25.0	2.5
Shiga	—	16.8	18.6	18.7	1.9
Kyoto	18.6	19.2	22.1	22.1	2.9
Osaka	14.8	15.5	18.7	18.2	2.7
Hyogo	19.3	19.2	23.7	21.7	2.5
Nara	24.3	23.9	25.6	25.5	1.6
Wakayama	21.1	20.7	26.4	30.7	9.9
Tottori	—	24.1	29.6	32.1	8.0
Shimane	29.1	28.7	32.3	37.5	8.8
Okayama	21.2	19.9	25.8	26.8	6.9
Hiroshima	20.2	20.6	24.1	25.4	4.8
Yamaguchi	23.2	24.9	27.6	30.8	5.9
Tokushima	25.1	26.3	30.8	32.8	6.4
Kagawa	24.1	20.2	22.4	23.7	3.5
Ehime	21.2	22.3	26.5	27.9	5.5
Kochi	28.8	29.7	34.8	38.9	9.2
Fukuoka	23.3	20.6	22.8	24.0	3.4
Saga	24.5	25.6	29.3	29.5	3.9
Nagasaki	26.9	31.6	31.5	31.9	0.3
Kumamoto	24.8	25.1	29.5	29.4	4.4
Oita	24.6	24.2	28.5	28.2	4.1
Miyazaki	26.2	25.8	31.2	32.8	7.0
Kagoshima	26.9	27.1	32.0	33.3	6.2
Okinawa	36.3	33.4	38.4	38.4	5.0
Japan	19.8	18.9	22.1	22.5	3.6
City areas	16.2	15.6	18.5	18.3	2.7
Tokyo area	15.8	14.6	17.3	17.2	2.5
Nagoya area	16.0	15.6	18.2	18.7	3.1
Osaka area	17.0	17.4	20.9	20.1	2.7
Local areas	23.4	22.2	25.8	26.8	4.6

Note: Variation errors for 1990 to 1999 are rounding errors.

IV. Impact of Economic Globalization on Local Employment

In the latter half of the 1980s, the focal point of globalization shifted from the cross-border movement of goods through import and export to the movement of capital through direct investment abroad. Consequently, the international business shifted from improvement trade pattern in which products are made by employing labor in Japan and exported to overseas markets, to business based overseas in which products are made by local labor and sold in the local marker or third countries, or imported back into Japan.

There are two systems of direct investment. One is direct investment abroad, in which Japanese enterprises establish production and sales bases in foreign countries, and the other is direct investment by foreigners, in which foreign enterprises establish production and sales bases in Japan. Direct investment abroad may have a negative impact on domestic employment, while direct investment by foreigners is expected to create employment in Japan. In fact, in the US in the latter half of the 1980s there was widespread concern that US companies would shift their plants to Mexico and other South American countries resulting in the hollowing of employment opportunities in the US, but fortunately this unemployment issue did not become a serious one thanks to Japanese companies and other foreign companies that invested in the US and employed American workers. Recently in Japan, an increasing number of companies have also tried to close their domestic plants and move them overseas, while an increasing number of foreign companies have made investments in Japan. As Japanese companies shift their production bases overseas, will foreign companies return the favor by helping Japan avoid a decline in employment, as occurred in the US in the latter half of the 1980s? Furthermore, will this help to maintain and expand employment in local areas?

As indicated in Tables 6 and 7, globalization of the economy has resulted in burgeoning investments and a growing number of employment opportunities, regardless of whether the investment is made by Japanese companies in foreign countries or by foreign companies in Japan. However, the amount of direct investment by foreign companies in Japan is much smaller than that of direct investment by Japanese companies in foreign countries. There are many other advanced nations where direct external investment exceeds direct internal investment. However, compared to these countries, the difference between the two types of investment in Japan is significantly larger. Comparing direct

Table 6. Changes in Japan's direct internal and external investments (Reporting or application basis)

Fiscal year	Direct external investment amount (millions of dollars)	Direct internal investment amount (millions of dollars)
1980	4,693	328
1981	8,931	389
1982	7,703	1,057
1983	8,145	1,115
1984	10,155	418
1985	12,217	930
1986	22,320	940
1987	33,364	2,214
1988	47,022	3,243
1989	67,540	2,860
1990	56,911	2,778
1991	41,584	4,339
1992	34,138	4,084
1993	36,025	3,078
1994	41,051	4,155
1995	52,748	3,934
1996	49,715	7,082
1997	54,776	5,608
1998	40,283	10,230
1999	66,080	21,057
2000	50,276	28,992
2001	33,239	17,913
2002	35,895	17,466
2003	35,189	18,253
2004	35,324	37,223

Source: Kinzai Institute for Financial Affairs, Inc., *Finance Ministry's Annual Report on International Finance*. Data obtained subsequent to 1995 is based on estimations made by JETRO.

Note: Since data released after 1995 was listed in yen-quotation, amounts have been converted into dollars using mid-year exchange rates.

external investment and direct internal investment as described in Table 6, reveals that in 1995 direct internal investment amounted to only one-fourteenth that of direct external investment. Comparing the numbers of employees as described in Table 7, reveals that the number of workers employed in Japan by foreign companies was only one-tenth that of workers employed overseas by

Table 7. Changes in the numbers of overseas employees of Japanese companies and domestic employees of foreign capital companies (1,000 persons)

	Number of employees in overseas subsidiaries of Japanese companies	Number of employees of foreign companies in Japan
1982	—	114
1983	—	140
1987	—	129
1988	1,326	169
1989	1,157	172
1990	1,550	182
1991	1,621	203
1992	1,404	192
1993	1,947	172
1994	2,194	227
1995	2,328	225
1996	2,745	230
1997	2,835	243
1998	2,749	264
1999	3,100	316
2000	3,450	331
2001	3,180	329
2002	3,410	294
2003	4,356	435
2004	4,139	431
2005	4,361	526

Sources: Ministry of Economy, Trade and Industry, *Survey of Overseas Business Activity* and *Survey of Foreign Capital Activities*.

Japanese companies. In other words, the number of workers employed in Japan by foreign companies was significantly lower than that of workers employed overseas by Japanese companies.

In 1998, however, investments made by foreign companies in Japan began increasing rapidly due to deregulation and a decline in domestic asset prices. As a result, in 2003, the ratio of direct external investment to direct internal investment dropped to 1.9:1. The number of employees of foreign companies has also increased to some extent since 1999. Now, the creation of employment by foreign companies has aroused great hope.

1. Employment Created by Foreign Companies for Local Areas

Looking at employment in local areas, the ratio of employment created by foreign companies varies significantly between prefectures. For example, 69% of foreign company headquarters are located in Tokyo. Adding the 9.1% located in Osaka and 8.9% in Kanagawa Prefecture amounts to 87% of all headquarters (The foreign companies mentioned here represent companies in Japan with more than one-third of their shares owned by foreign investors). Furthermore, according to office location-based statistics and a breakdown of the number of jobs created in each prefecture by foreign companies in 1996, 36% of employees reside in Tokyo and 13% and 9% are located in Kanagawa and Osaka, respectively. The ratio of employees working in foreign company offices to the total number of employees in each prefecture is 2.4%, 2.6% and 2.7% in Tokyo, Kanagawa and Hiroshima respectively, indicating that a substantial number of jobs are created by foreign companies. In other prefectures, however, this ratio is very small (Fukao and Amano 2004).

The reason behind the collection of foreign companies in major cities is their industry characteristics. Japanese companies entering the US are mainly manufacturing companies such as automobile and electronics manufacturers. Therefore, many of these companies are located in local areas in the US, and the jobs they create are not concentrated in major cities. On the other hand, foreign companies entering Japan are mainly city-oriented industries such as finance and IT. Consequently, the current number of employment opportunities created by foreign companies is high in major cities and lower in local areas.

2. Effect of Direct External Investment on Employment in Japan

What effect, then, does direct external investment by Japanese companies have on employment in Japan? Does overseas investment by these companies cause a decline in employment in Japan? Analysis results using company panel data reveal that companies that constructed their plants elsewhere in Asia temporarily reduced their number of employees in Japan. However, this effect does not last very long, and these companies are more likely to increase productivity and profitability than those with no manufacturing bases overseas, ultimately resulting in employment growth (Higuchi and Matsuura 2003). Therefore, one cannot claim that direct external investment by Japanese companies reduces domestic employment. The problem lies in a disparity in domestic employment between areas in Japan affected by direct external

investment. Companies setting up operations overseas are clearly reducing employment in local areas while increasing employment in major Japanese cities.

A company always considers its international division of labor when determining direct external investment. These companies endeavor to strengthen their R&D and business divisions in Japan to facilitate conversion of their products to those with high added value. As a result, the tendency is to expand company headquarters and prototype production plants located in major cities, increase their employee base, but also close mass-production plants constructed in local areas during the high-speed growth era or bubble economy when there was a shortage of manpower (Horaguchi 1997, 1998). In the past, these plants employed a large number of recent high-school graduates. However, reducing the number of jobs for these graduates and clerical staff has made it even more difficult for high-school graduates in local areas to find jobs than it is for university graduates in major cities.

Looking only at employment created by foreign companies and domestic employment affected by direct external investment by Japanese companies, it is clear that globalization of the economy is maneuvering toward a decline in employment in local areas. As companies are now able to choose overseas locations for their plants, advantageous conditions beyond low labor costs must be proposed in order to attract companies to local areas. Considering the high cost of labor in Japan, it is simply too difficult to surpass overseas countries in terms of low labor costs. Therefore, in order to attract these companies to local areas, Japan must provide for industry-government-academia tie-ups and ensure competent personnel, establish infrastructure development including information networks and other attractive conditions to demonstrate the strengths of local areas.

V. Programs Necessary for the Intrinsic Creation of Employment in Local Areas

Formerly, in Japan, financial policies associated with the expansion of public investment played an important role in creating employment in local areas. However, as public finances worsen, there are fewer and fewer opportunities to create employment through macroeconomic policies. It is presently a major challenge to expand employment in local areas by increasing

financial expenditure. The globalization of the economy is causing a broadening of interregional disparities. Until the first half of the 1980s, globalization of the economy signified the transfer of materials overseas through import and export. Since then, however, direct external investment has increased and the transfer of capital overseas has expanded. This has had a radical effect on employment. An increase in exports greatly contributed to an increase in employment in local areas, especially those where many plants were located. However, direct external investment by Japanese companies has resulted in the downsizing of mass-production plants in local areas of Japan, making it difficult for recent high-school graduates there to find jobs. Meanwhile, an increasing number of foreign companies have expanded employment in major cities but not in local areas.

In addition to changes in labor demand, changes in labor supply have contributed to broadening interregional disparities. In times when there was an abundance of young persons, interregional employment disparities were successfully narrowed by population migration. However, as Japan's population continues to age, so does the number of individuals within the age group whose migration costs are the highest. As a result, Japan can no longer expect population migration to narrow interregional disparities. Moreover, the declining birth rate among young persons has led to a society of one son or one daughter families that, in all likelihood, will remain in their hometown or village. This has made it difficult to determine whether the many young persons migrating from local areas to major cities will successfully fill the labor supply and demand gap as they did in the past. Therefore, it has becomes increasingly necessary for the local governments, business and communities to take initiative to implement their own employment strategies by creating employment opportunities that require suitable, highly-motivated personnel and placing them accordingly.

If financial resources are transferred according to the "tripartite reform" for realignment of financial resources of the central and local governments, the financial authority of local governments would be strengthened. However, in order to effectively utilize the authority, the governments would have to secure a leader to plan and implement policies. Even if laws were amended, this is no easy task. Nevertheless, they have no choice but to train and secure such a leader, even if a substantial amount of time is required. For this, Japan will need a human resources strategy.

Employment strategy, which differs from simple employment measures, is a strategy combining numerous independent measures and implementing them following specific schedules and in pursuit of specific objectives. If assorted measures are to be implemented, it is necessary to first verify that these measures are consistent with one another. In Japan, in the latter half of the 1980s, the Equal Employment Opportunity Act was established in order to facilitate the participation of women in the labor market. On the other hand, an income tax deduction known as a "special exemption for spouses" was established, while pension plans establish a "third subscriber group." Precedence was given to full-time housewives and female workers with annual earnings at or below a specified amount, ultimately curbing female employment. As these contradictory policies were implemented simultaneously, the effects of individual policies were offset and no substantial progress in the participation of women in the workforce ensued. In order to achieve an objective, individual policies must be consistent with one other and merged together. Only then will a significant outcome arise. Regardless of the "strategy" being implemented, the objective and concerned parties must be clearly identified, including how these individuals are linked, and how and when they are to implement the strategy in order to realize the objective.

European countries struggled with a high unemployment ratio for many years, during which time they implemented a wide variety of measures. One conclusion reached by these countries following their search for effective measures is the importance of joint-implementation of an employment strategy by the concerted efforts of local governments, business and communities. In a manner of speaking, Japan now facing issues analogous to those faced by European countries at the time, including the reduction of public investment. Since extrinsic programs for creating employment are not very promising, there will be a growing need in Japan for autonomous bodies, business firms, labor unions and citizens to jointly implement employment strategies using local strengths and characteristics. In this case, the valuable experience of overseas countries should prove extremely useful in the implementation of specific measures in Japan.

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