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Regional Employment

Contents

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EDITORIAL OFFICE
The Japan Institute for Labour Policy and Training
International Affairs Department
8-23, Kamishakujii 4-chome, Nerima-ku, Tokyo 177-8502 Japan
TEL: +81-3-5903-6315 FAX: +81-3-3594-1113
Email: jlr@jil.go.jp
Homepage: http://www.jil.go.jp/english/index.html
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Regional Employment

Articles

NEXT ISSUE (Spring 2008)
The Spring 2008 issue of the Review will be a special edition devoted to **Employment of Older Persons**.

Introduction

Regional Employment

This issue's special feature is regional employment in Japan. Various types of disparities have been recently observed in Japan, and it has become a major social issue. Widening income gaps, disparities in treatment between regular and non-regular employees, youth employment issues such as NEET or *freeter*, and "working poor" issues have been extensively discussed. Regional employment is another topic which has caught much attention recently. The widening gap in employment between urban and rural areas is one factor causing this problem. In this issue, six studies were carefully selected to present an overall picture of regional employment issues.

First, one needs to find the reason why regional employment has been aggravated. In his *Circumstances behind Growing Regional Disparities in Employment,* Yoshio Higuchi examines the current status and cause of regional disparities in employment by using a variety of data. He argues that such disparities derive not only from the recession in the 1990's, but also from a more structural problem. Regional gaps will become smaller if labor mobility is high. Higuchi points out that the declining birthrate and aging population inhibit such mobility. He also shows an estimate that the decrease in government expenditures due to financial distress has impacted regions which have a high ratio of jobs created by such expenditures. Higuchi further argues that economic globalization has worsened regional employment and that regional spontaneous efforts to develop plans for job creation is necessary.

While Higuchi identifies the reason for the deterioration in local employment, there are some regions which enjoy a relatively good job environment. Takeo Kikkawa's *Regional Resurgence and Job Creation* identifies the characteristics of such regions by analyzing the factors determining employment improvement from an industrial point of view. He argues that there are roughly two types of regions with successful job creation. The first one is the Shiga Model where industrial accumulation leads to good performance in the manufacturing industries, which results in vitalization of the local economy and job creation. The second is the Nagahama Model, where innovation of tertiary rather than manufacturing industries results in an energized regional economy and new

jobs. By carefully portraying these two patterns, Kikkawa points out that the effective use of local resources and inviting demand from external markets are key points in regional resurgence leading to job creation.

The subsequent four studies present specific discussions of regional employment policies by the government and municipalities. In his *Measures for Supporting Regional Job Creation in Japan,* Minoru Ito compares policies by the 1990s and after 2000, and points out that there are significant differences between them. The former policies were simply planned by municipalities by adopting government policy, and thus ignored regional characteristics. Such policies were relatively effective until the 1970s when the social infrastructure in each region was insufficient, but their effect largely declined in the 1990s. Therefore, the regional policies after 2000 were changed so that municipalities could take the initiative in planning and creating plans for regional resurgence. Ito's report concisely summarizes this history.

Special zones for structural reform were one of the features of these policies since 2000. Such zones introduce special regulations which meet regional characteristics, based on municipalities' and private companies' spontaneous planning. The objective is to vitalize the regional economy. There are only few studies which analyze the effects thoroughly. In his *Job Creation by Local Initiatives: Effects of Special Zones for Structural Reform*, Kazufumi Yugami measures the effect of the special zone by using econometric methods. First, he used The Japan Institute for Labour Policy and Training (JILPT)'s unique survey on municipalities implementing the special zone and then analyzed subjective opinions on its effect on employment. The ratio of those replying that the special zone had an effect was high in those municipalities which had implemented related measures before they were approved as such a zone. He also gave an analysis by using the actual number of the employed and concluded that the zone's effect on creating jobs was not evident. It was rather that the municipalities, which had improvement in employment in related industries, decided to become one of the zones.

Vitalizing the economy is not the only objective of regional employment policies. Placing employment is also an important aspect of these policies. Yanfei Zhou's *A Convergence Analysis on the Efficiency of Public Job Placement Services in Japan* analyzes factors determining the efficiency of matching of public employment referrals, such as the rate of filled vacancy and

placement. First, through chronological analysis, she identifies that the labor movement between regions contributes to a convergence in matching efficiency in regional blocks. She then points out that the regional employment rate and the level of the rate of filled vacancy are rigid. Zhou conducted a regression analysis describing labor supply/demand indicators, labor force and industrial structures, and indicators of measures of each region's public job placement agencies, and found out that the regional gaps of matching efficiency were influenced more by the market share of public job placement services, supply and demand of the labor market, and the industrial and labor structure. Therefore, she points out that one needs to be careful in measuring employment office's performance using the rate of filled vacancy and employment.

Lastly, Hiroaki Watanabe's *Present Situation and Issues of Municipal Employment Strategy* analyzes regional employment strategies implemented by municipalities, using a survey conducted by JILPT. The result shows that municipalities with visions or plans on employment measures have a strong tendency to establish a specialized section in charge of developing measures for job creation. Such municipalities implemented various employment measures which have resulted in certain effects. Having the specialized section is only possible when securing human resources with expertise, which is a challenge for many municipalities. While it is necessary for municipalities to have a clear vision on the employment issue, it is also equally important for them to foster key persons or leaders to realize such a vision.

Regional job creation will become increasingly important, but it can only be realized through a long-term process. Fostering regional leaders is indispensable. The featured studies hereby not only precisely identify the status and cause of regional employment problems in Japan, but also successfully provide politically significant suggestions through objective analysis. Furthermore, JILPT has put significant efforts into studies on regional employment issues, which resulted in achievements such as Ito, Yugami, Zhou, and Watanabe's works. We hope that this feature will promote an understanding of regional employment problems in Japan.

Souichi Ohta
Kieo University

Circumstances behind Growing Regional Disparities in Employment

Yoshio Higuchi
Keio University

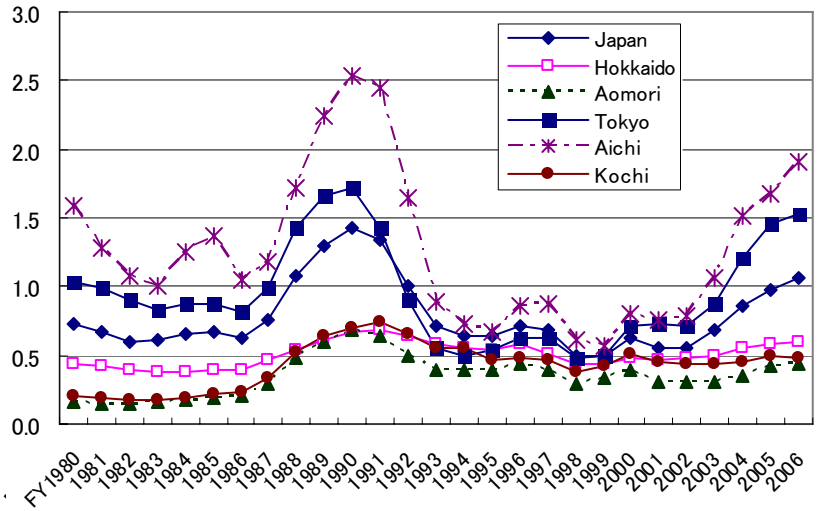
I. Regional Disparities in Employment

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



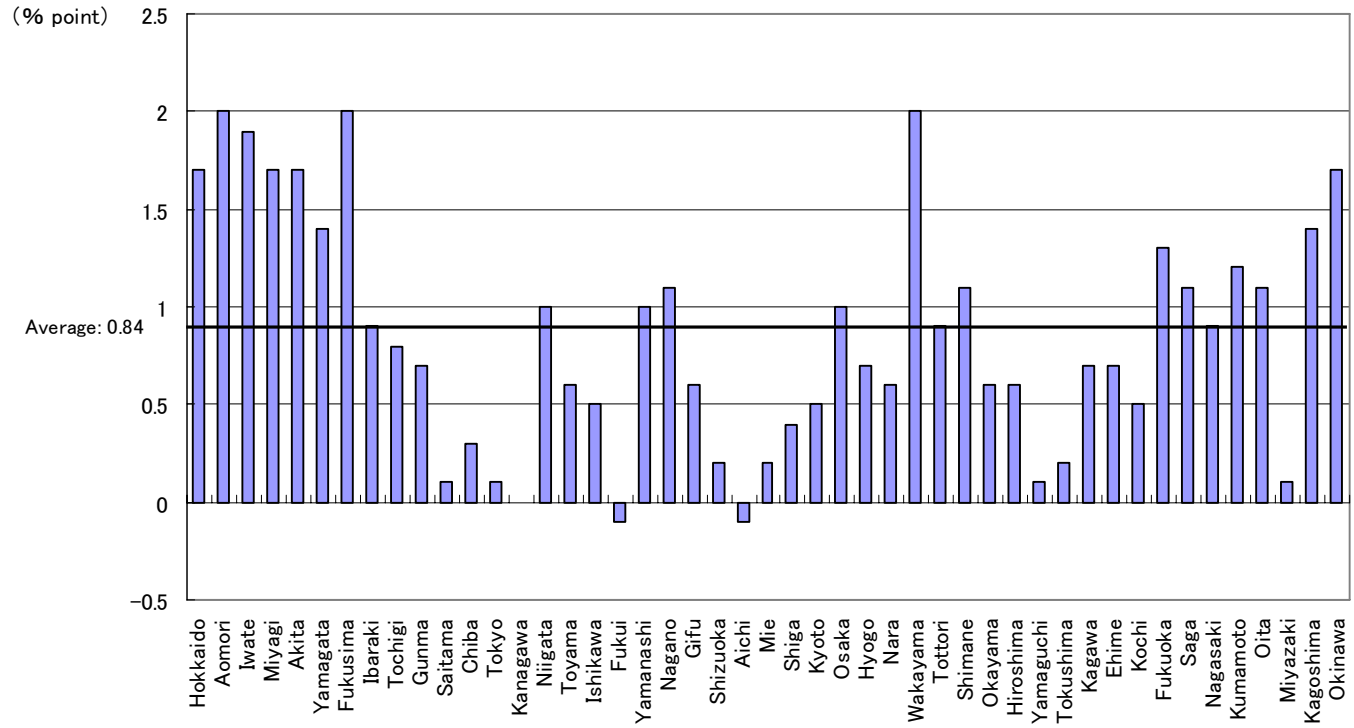
Source：Ministry of Health, Labour and Welfare, *Statistics of Public Employment Security Office* (on general job introduction).
Note：Including part-time work.

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.

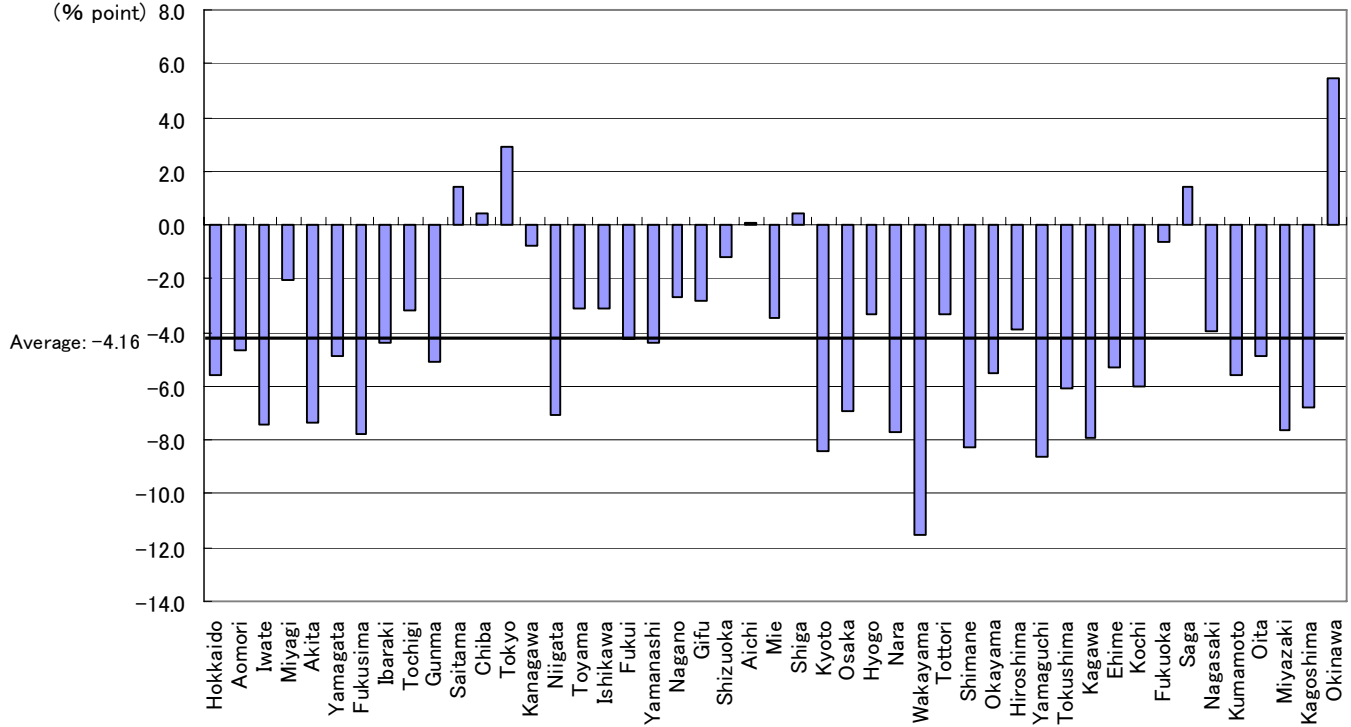
In conjunction with the short-term factor of economic decline, there are also structural factors behind the declining employment situation in local areas.

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*.

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.

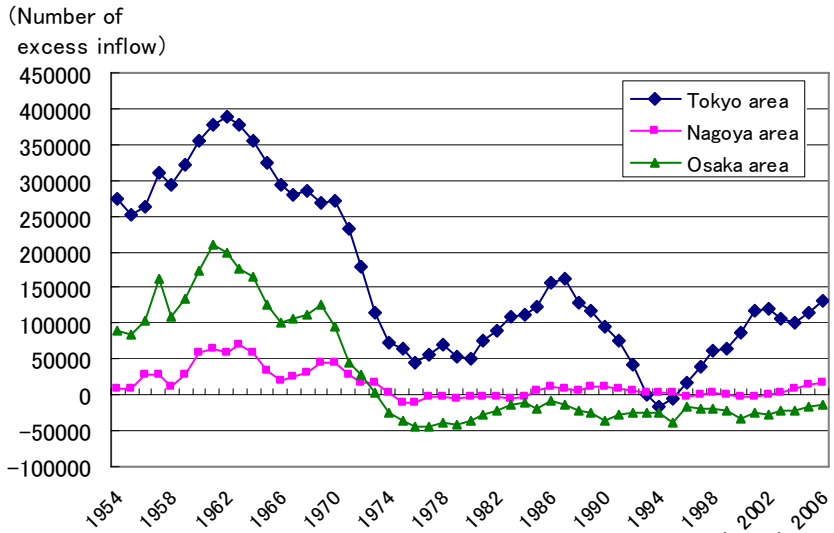
II. Changes in Intraregional Population Migration

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.

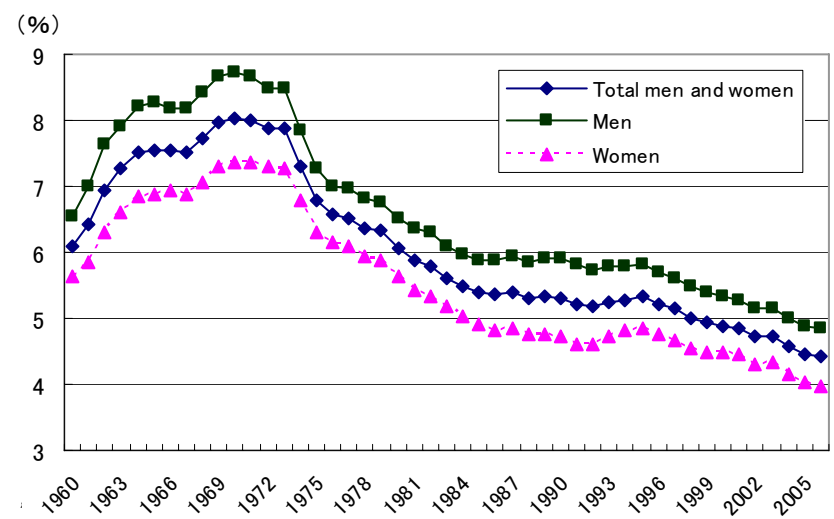
Figure 5 indicates that changes in the ratio of interregional population migration have declined significantly. There are two factors leading to this decline. One is the aging population, wherein the number of elderly persons with a lower migration rate has increased, thereby affecting an overall decline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



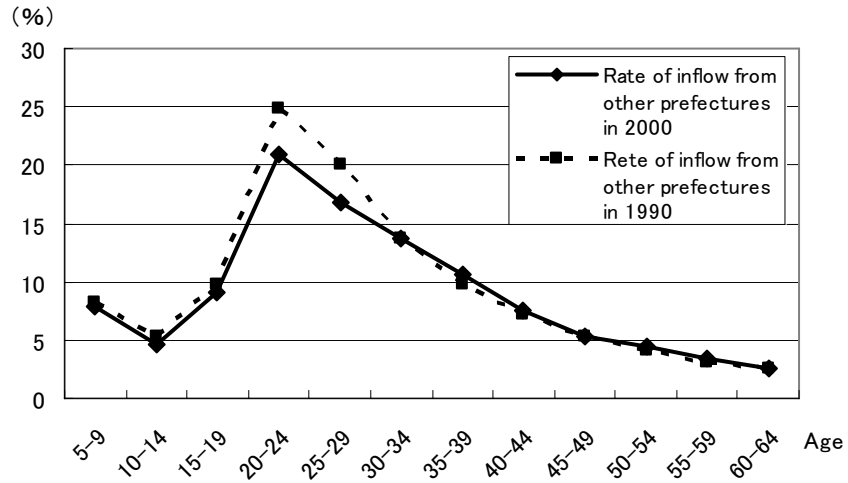
Source: Statistics Bureau of Ministry of Internal Affairs and Communications, *Report on Population Transfer in Basic Resident Register*.

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



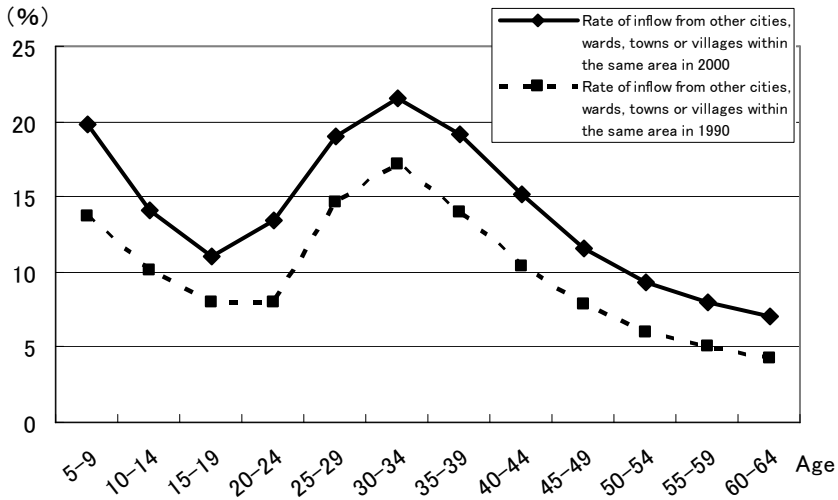
Source: Statistics Bureau of Ministry of Public Management, Home Affairs, Posts and Telecommunications, *National Census.*

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.

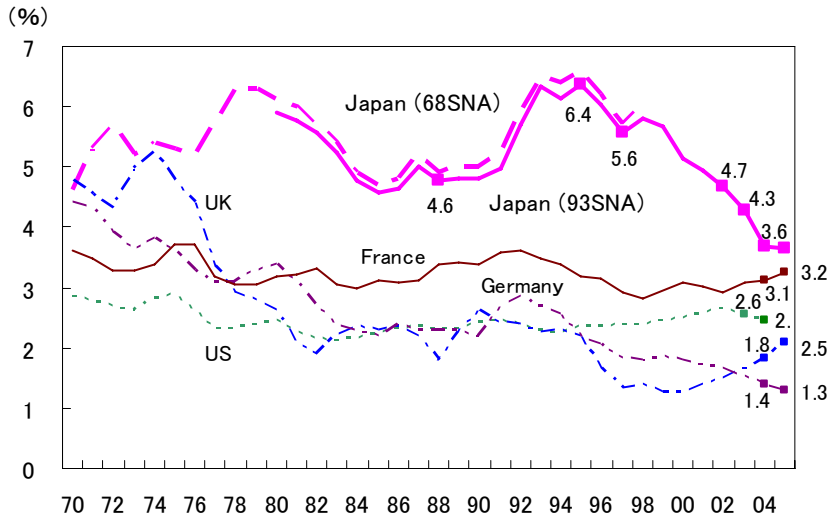
1. The Sum of Japan's Public Investment Compared to Other Countries

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



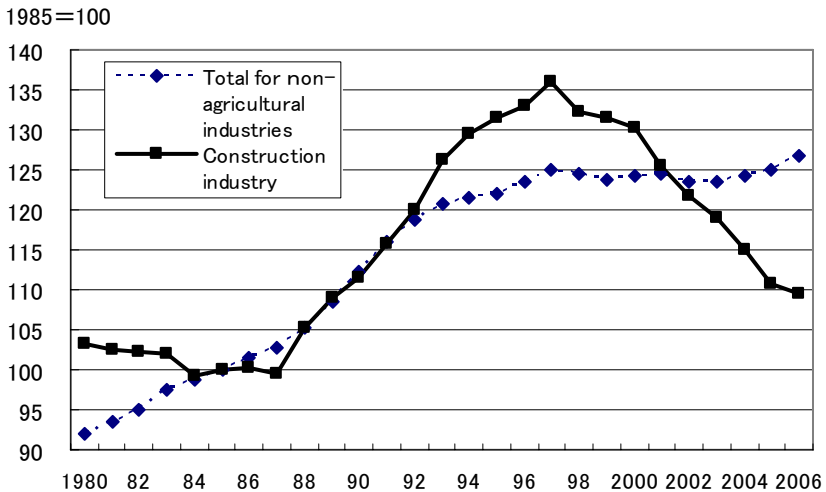
Sources: Cabinet Office, Government of Japan, *Annual Report on National Economic Accounting* (on a fiscal year basis) for Japan. OECD, *National Accounts 2000* for the UK, the US, Germany and France.

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

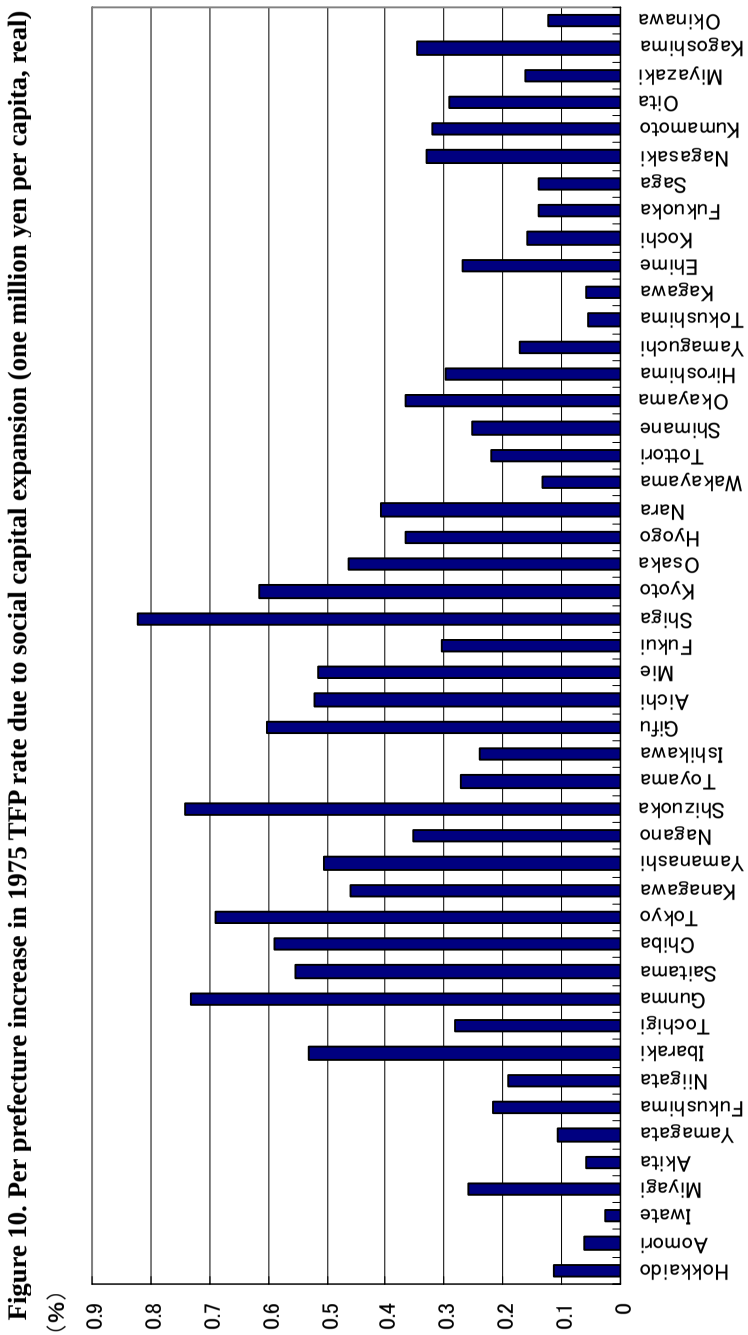
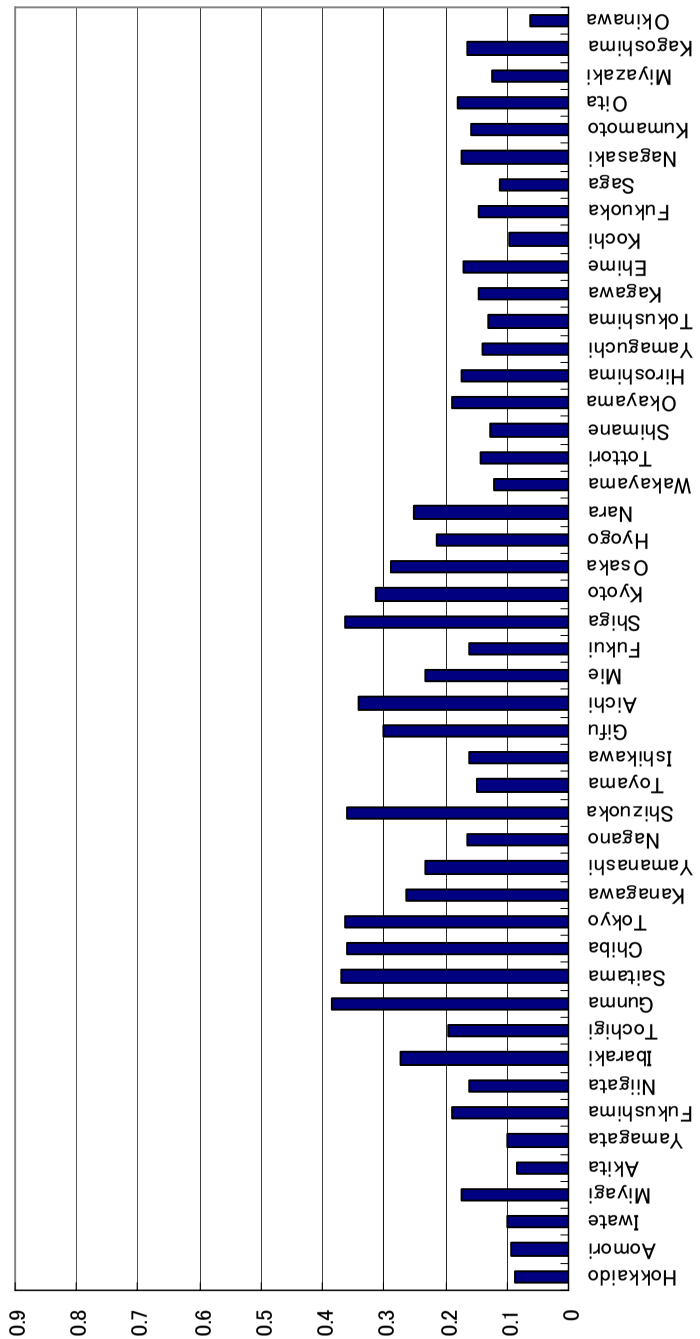


Figure 10. Per prefecture increase in 1975 TFP rate due to social capital expansion (one million yen per capita, real)
(%)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Hokkaido
Aomori
Iwate
Miyagi
Akita
Yamagata
Fukushima
Niigata
Ibaraki
Tochigi
Gunma
Saitama
Chiba
Tokyo
Kanagawa
Yamanashi
Nagano
Shizuoka
Toyama
Ishikawa
Gifu
Aichi
Mie
Fukui
Shiga
Kyoto
Osaka
Hyogo
Nara
Wakayama
Tottori
Shimane
Okayama
Hiroshima
Yamaguchi
Tokushima
Kagawa
Ehime
Kochi
Fukuoka
Saga
Nagasaki
Kumamoto
Oita
Miyazaki
Kagoshima
Okinawa

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.

References

Fukao, Kyoji, and Tomofumi Amano. 2004. *Tainichi chokusetsu toshi to nippon keizai* [Direct investment in Japan and the Japanese economy]. Tokyo: Nippon Keizai

Shinbunsha.

Higuchi, Yoshio, Takanobu Nakajima, Masaki Nakahigashi, and Ken Hino. 2002. Todofuken no keizai kasseika niokeru seifu no yakuwari [The government's role in prefectural economic revitalization]. Issued from the Policy Research Institute, the Ministry of Finance.

Higuchi, Yoshio, and Toshiyuki Matsuura. 2003. Kigyo paneru deta ni yoru koyo koka bunseki: Jigyo soshiki no henko to kaigai chokusetsu toshi ga sonogo no koyo ni ataeru eikyo [An analysis of employment effect using company panel data: Subsequent effect of business organizational changes and direct external investment on employment]. Discussion Paper 03-J-019, the Research Institute of Economy, Trade and Industry, Tokyo.

Horaguchi, Haruo. 1997. Nippon no sangyo kudoka: 1987 nen kara 93 nen no shuyo denki meka ni tsuite (I) [Hollowing out in Japanese manufacturing: A case study on electric industry from 1987 to 1993 (I)]. *The Hosei Journal of Business* 34, no.3.

———. 1998. Nippon no sangyo kudoka: 1987 nen kara 93 nen no shuyo denki meka ni tsuite (II) [Hollowing out in Japanese manufacturing: A case study on electric industry from 1987 to 1993 (II)]. *The Hosei Journal of Business* 34, no.4.

Community Based Economic Renaissance and Job Creation in Japan

Takeo Kikkawa
Hitotsubashi University

I. Introduction: Economic Recovery and Widening of Regional Divergences

Japan's economic upturn that began in February 2002 continued for a prolonged period of time, and by November 2006, the continuous period of economic expansion surpassed the previous record of 57 months set between November 1965 and July 1970. There are, however, two facts that should be noted regarding this latest economic recovery. One is that compared with the economic recovery of 1965-70, the economic growth rate is considerably lower. The other is that in the process of recovery, inter-firm, inter-industrial, inter-regional, and various other forms of divergences are widening.

Of these divergences, this paper focuses on regional divergences. The objective of this paper is to analyze why regional divergences in improvement in the state of employment came to be and, based on the analysis, to identify the conditions of regional recovery that lead to job creation.

The regional comparison of the unemployment rate and the effective job offer-job seeker ratio from 2001 onwards, based on a reference material used in the Monthly Economic Report of the Cabinet Office of the Government of Japan in July 2006 (Cabinet Office 2006), reveals that:

(i) The unemployment rate of Kanto, Tokai, Hokuriku, and Chugoku Regions are lower than the national average, while that of Hokkaido, Tohoku, Kinki, Kyushu, and Okinawa Regions are higher than the national average.

(ii) The effective job offer-job seeker ratio of Kanto, Tokai, Hokuriku, and Chugoku Regions are higher than the national average, while that of Hokkaido, Tohoku, Kinki, Kyushu, and Okinawa Regions are lower than the national average.

Because the unemployment rate declined and the effective job offer-job seeker ratio rose for the country as a whole during the period of economic recovery after 2002, it is a fact that improvement was generally made in the state of employment. However, there are large regional divergences in the

improvement made in employment. As for the effective job offer-job seeker ratio, the gap is actually widening. There is a significant difference in the improvement made in the state of employment between Kanto, Tokai, Hokuriku, and Chugoku Regions on one hand, which had figures above the national average, and Hokkaido, Tohoku, Kinki, Kyushu, and Okinawa Regions on the other, which had figures below the national average.[1]

Why did regional divergences in the improvement made in the state of employment came to be? To consider this question, we examine, in Sections II and III, the recent increase/decrease in the number of employees in Japan by industry and prefecture.

II. Analysis of Increase/Decrease in the Number of Employees by Industry in 1999-2004

1. Increase/Decrease in the Number of Employees by Industry

Data on the increase/decrease in the number of employees, which reflect how sound the state of employment is, can be obtained from the Establishment and Enterprise Census of the Statistics Bureau of the Ministry of Internal Affairs and Communications. In this section, we use Ministry of Internal Affairs and Communications (2006), which is the latest report of the census, to examine the increase/decrease in the number of employees in Japan from 1999 to 2004 by industry.

Table 1 shows the increase/decrease in the number of employees by industry and prefecture in 1999-2004. We can see from the table that the number of employees decreased by 1,739,184 in the last five years in Japan and that the rate of decline was 3.2%. Even though improvement in employment was made to a certain degree in the period after 2002, the employment size of Japan as a whole contracted during the period from 1999 to 2004.

The industries with a decline in the number of employees were, in the order of industries with the largest declines, the manufacturing industry (-1,333,831), wholesale and retail trade (-956,542), construction (-707,087),

[1] The unemployment rate and the effective job offer-job seeker ratio of Shikoku Region remained close to the national average during this period (Cabinet Office 2006).

Table 1. Increase/decrease in the number of employees by industry and prefecture (1999-2004)

Industry	Number of employees		Number of employees in 2004	Number of prefectures	
	Number of increase	Rate of increase (%)		With increase	With decrease
Agriculture	+15,431	+10.2	166,338	33	14
Forestry	-2,790	-13.8	17,410	13	34
Fisheries	-9,723	-20.2	38,468	8	39
Mining	-17,385	-31.6	37,549	0	47
Construction	-707,087	-13.9	4,382,413	0	47
Manufacturing	-1,333,831	-11.8	9,940,449	0	47
Electricity, gas, heat supply and water	-25,636	-11.9	188,914	6	41
Information and communications	+152,509	+12.4	1,382,316	19	28
Transport	-94,395	-3.2	2,822,174	14	33
Wholesale and retail trade	-956,542	-7.3	12,218,819	2	45
Finance and insurance	-278,523	-16.3	1,431,140	0	47
Real estate	+16,251	+1.7	965,827	26	21
Eating and drinking places, accommodations	-100,377	-2.0	4,816,722	17	30
Medical, health care and welfare	+935,309	+29.0	4,156,236	47	0
Education, learning support	+110,973	+8.8	1,367,742	44	3
Compound services	-30,595	-7.9	355,781	14	33
Services (not elsewhere classified)	+587,227	+8.2	7,779,098	44	3
All industries	-1,739,184	-3.2	52,067,396	3	44

Source: Compiled from Statistics Bureau, Ministry of Internal Affairs and Communications (2006).

finance and insurance (-278,523), eating and drinking places and accommodations (-100,377), transport (-94,395), compound services (-30,595), electricity, gas, heat supply and water (-25,636), mining (-17,385), fisheries (-9,723), and forestry (-2,790). Among the industries with a decline of more than 100,000, finance and insurance, construction, and manufacturing had a rate of decline of more than 10%. On the other hand, the industries with an increase in the number of employees were, in the order of industries with the largest increases, medical, health care and welfare (935,309), services (not elsewhere classified) (hereafter called “other services”) (587,227), information and communications (152,509), education and learning support (110,973), real estate (16,251), and agriculture (15,431). Among the industries with an increase of more than 100,000, medical, health care and welfare and information and communications had a rate of increase of more than 10%.

2. Three Patterns of Increase/Decrease in the Number of Employees

Table 1 tells us that there were three patterns of increase/decrease in the number of employees as regards different industries in prefectures from 1999 to 2004.

The first is the industries in which the number of employees increased in the majority or all of prefectures. This corresponds to medical, health care and welfare (increase in 47 prefectures and decline in 0), other services (increase in 44 and decline in 3), and education and learning support (increase in 44 and decline in 3).

The second is the industries in which the increase/decrease in the number of employees differed from prefecture to prefecture. This corresponds with agriculture (increase in 33 and decline in 14), real estate (increase in 26 and decline in 21), information and communications (increase in 19 and decline in 28), eating and drinking places and accommodations (increase in 17 and decline in 30), transport (increase in 14 and decline in 33), compound services (increase in 14 and decline in 33), and forestry (increase in 13 and decline in 34).[2]

The third is the industries in which the number of employees decreased in the majority or all of prefectures. This corresponds to manufacturing (increase in 0 prefecture and decline in 47), construction (increase in 0 and decline in 47), finance and insurance (increase in 0 and decline in 47), mining (increase in 0 and decline in 47), wholesale and retail trade (increase in 2 and decline in 45), electricity, gas, heat supply and water (increase in 6 and decline in 41), and fisheries (increase in 8 and decline in 39).

III. Analysis of Increase/Decrease in the Number of Employees by Prefecture in 1999-2004

1. Increase/Decrease in the Number of Employees by Prefecture

Following on the analysis of the increase/decrease in the number of employees by industry, we examine, in this section, the increase/decrease in the number of employees by prefecture in Japan in 1999-2004.

Table 2 shows the rate of increase in the number of employees in all

[2] Industries listed are those with increase in more than 10 prefectures as well as decrease in more than 10 prefectures.

Table 2. Rate of increase in the number of employees by prefecture (1999-2004)

(%)

Prefecture	All industries	Manufac-turing industry	Prefecture	All industries	Manufac-turing industry	Prefecture	All industries	Manufac-turing industry
Hokkaido	-5.9	-13.1	Ishikawa	-4.6	-12.1	Okayama	-5.7	-12.4
Aomori	-4.1	-16.9	Fukui	-5.5	-13.4	Hiroshima	-5.5	-12.9
Iwate	-5.4	-12.8	Yamanashi	-2.6	-8.7	Yamaguchi	-6.2	-10.1
Miyagi	-3.0	-12.4	Nagano	-4.1	-11.4	Tokushima	-7.4	-16.8
Akita	-7.9	-18.9	Gifu	-3.0	-9.0	Kagawa	-9.0	-17.7
Yamagata	-5.4	-14.1	Shizuoka	-2.8	-8.1	Ehime	-5.2	-18.3
Fukushima	-4.3	-13.0	Aichi	-2.8	-6.3	Kochi	-7.3	-13.9
Ibaraki	-3.6	-11.4	Mie	-3.3	-6.4	Fukuoka	-2.4	-9.7
Tochigi	-4.7	-11.5	Shiga	-0.7	-7.9	Saga	-2.8	-10.1
Gunma	-3.4	-12.4	Kyoto	-4.5	-13.6	Nagasaki	-4.5	-16.0
Saitama	-1.4	-10.6	Osaka	-7.6	-16.5	Kumamoto	-0.8	-7.8
Chiba	-0.6	-14.6	Hyogo	-5.7	-14.2	Oita	-2.6	-6.4
Tokyo	+2.0	-8.3	Nara	+0.4	-13.6	Miyazaki	-2.8	-14.2
Kanagawa	-3.6	-18.0	Wakayama	-6.3	-16.3	Kagoshima	-2.0	-9.4
Niigata	-5.2	-11.1	Tottori	-4.9	-17.3	Okinawa	+3.2	-1.9
Toyama	-5.2	-12.6	Shimane	-4.8	-19.8	National Average	-3.2	-11.8

Source: Compiled from Statistics Bureau, Ministry of Internal Affairs and Communications (2006).

Note: The shaded figures in the “all industries” column are those of prefectures in which the percentage change was positive or in which the rate of decline was smaller than the national average. The shaded figures in the “manufacturing industry” column are those of prefectures in which the rate of decline was less than 10%.

industries and in the manufacturing industry from 1999 to 2004 by prefecture. We can see from the table that, in the last five years, the number of employees increased only in 3 prefectures, namely, Okinawa Prefecture, Tokyo Metropolis, and Nara Prefecture, out of 47 prefectures in Japan (Tokyo Metropolis is included as a prefecture). Besides these three prefectures, the rate of decline in the number of employees was less than 1% in Chiba Prefecture, Shiga Prefecture, and Kumamoto Prefecture (the national average was a decline of 3.2%). It can be said that the state of employment in these six prefectures was relatively favorable compared with other prefectures. In thesection below, we closely examine the increase/decrease in the number of employees by industry in each of the six prefectures to elucidate why the state of employment was favorable in these prefectures.

Table 3. Increase/decrease in the number of employees by industry in prefectures where the number of employees increased (1999-2004)

Industry	Okinawa		Tokyo		Nara	
	Number of increase	Rate of increase (%)	Number of increase	Rate of increase (%)	Number of increase	Rate of increase (%)
Agriculture	+507	+47.6	+241	+8.8	-44	-11.7
Forestry	-4	-26.7	-106	-48.2	+33	+18.6
Fisheries	+44	+23.0	-93	-85.3	-23	-57.5
Mining	-154	-36.2	-1,088	-30.2	-28	-30.4
Construction	-3,075	-6.2	-48,168	-9.4	-3,676	-11.8
Manufacturing	-530	-1.9	-79,469	-8.3	-13,137	-13.6
Electricity, gas, heat supply and water	+239	+13.3	+694	+2.8	-299	-18.5
Information and communications	+2,877	+34.4	+147,581	+29.9	-53	-2.2
Transport	-725	-3.0	-14,944	-3.7	-1,247	-8.2
Wholesale and retail trade	+2,238	+2.0	-139,389	-7.1	+3,288	+3.3
Finance and insurance	-2,664	-19.5	-48,697	-12.5	-1,292	-11.2
Real estate	-467	-4.2	+22,960	+10.6	-416	-6.4
Eating and drinking places, accommodations	-2,874	-4.5	+8,509	+1.1	+1,608	+4.5
Medical, health care and welfare	+12,113	+32.6	+88,723	+26.2	+13,328	+50.1
Education, learning support	+374	+2.8	+28,150	+11.6	+883	+7.2
Compound services	-739	-18.9	-341	-2.8	+178	+7.1
Services (not elsewhere classified)	+6,580	+10.1	+186,231	+14.4	+2,456	+5.0
All industries	+13,740	+3.2	+150,794	+2.0	+1,559	+0.4

Source: Compiled from Statistics Bureau, Ministry of Internal Affairs and Communications (2006).

2. Six Prefectures with Favorable State of Employment

Table 3 shows increase/decrease in the number of employees by industry in Okinawa Prefecture, Tokyo Metropolis, and Nara Prefecture, which were the prefectures in which the number of employees increased from 1999 to 2004. In these three prefectures, the relatively favorable state of employment was realized because particular developments different from the national trend were observed. By comparing Table 3 with Table 1, we examine these "particular developments" observed in each of the three prefectures.

In Okinawa Prefecture, in which the rate of increase in the number of employees from 1999 to 2004 was the highest in the country at 3.2%, an exceptional increase in the number of employees in wholesale and retail trade and the fact that the rate of decline in the number of employees in the

manufacturing and construction industries was well below 10% had a significant meaning. The rise in the number of employees in information and communications and agriculture is also noteworthy.

In the Tokyo Metropolis, which had the second highest rate of increase in the number of employees in the country at 2.0%, the increase in the number of employees in information and communications was particularly noticeable. The decline in the number of employees in the manufacturing and construction industries was below 10%, and the increase in the number of employees in other services, real estate, and eating and drinking places and accommodations was also substantially above the national average.

In Nara Prefecture, in which the number of employees also increased, albeit at a rate of 0.4%, there was, as in Okinawa Prefecture, an exceptional increase in the number of employees in wholesale and retail trade. In addition, the increase in the number of employees in medical, health care and welfare was particularly high. There was also an increase in the number of employees in eating and drinking places and accommodations and compound services.

Table 4 shows increase/decrease in the number of employees by industry in Chiba Prefecture, Shiga Prefecture, and Kumamoto Prefecture, which were the prefectures in which the number of employees decreased from 1999 to 2004 but the rate of decline was less than 1%. In these three prefectures, too, a relatively favorable state of employment was maintained because particular developments different from the national trend were observed. Again, we point out, by comparing Table 4 with Table 1, the “particular developments” in each of the prefectures.

In Chiba Prefecture, the rate of increase in the number of employees was high in medical, health care and welfare. The number of employees grew markedly in transport and agriculture. The rates of decline in the number of employees in construction and wholesale and retail trade were also low.

In Shiga Prefecture, the rate of decline in the number of employees in manufacturing was low. There was a substantial growth in the number of employees in medical, health care and welfare, other services, education and learning support, real estate, and agriculture. In addition, the number of employees also increased in eating and drinking places and accommodations.

In Kumamoto Prefecture, the rates of decline in the manufacturing industry and wholesale and retail trade were low. In addition, the number of employees increased in transport, eating and drinking places and accommodations, and

Table 4. Increase/decrease in the number of employees by industry in prefectures where the rate of decline in the number of employees was less than 1% (1999-2004)

Industry	Chiba		Shiga		Kumamoto	
	Number of increase	Rate of increase (%)	Number of increase	Rate of increase (%)	Number of increase	Rate of increase (%)
Agriculture	+1,127	+21.4	+719	+60.2	+411	+11.7
Forestry	-9	-8.6	-13	-15.7	-190	-28.8
Fisheries	-216	-31.9	-56	-33.3	-389	-23.5
Mining	-748	-43.3	-135	-37.7	-359	-29.9
Construction	-15,686	-9.6	-6,492	-13.9	-9,617	-13.1
Manufacturing	-45,060	-14.6	-13,778	-7.9	-8,793	-7.8
Electricity, gas, heat supply and water	-1,259	-15.7	-111	-7.1	-229	-10.5
Information and communications	-1,962	-6.9	+135	+3.7	-1,933	-19.6
Transport	+3,656	+2.8	-774	-3.0	+1,327	+4.5
Wholesale and retail trade	-9,193	-2.0	-5,717	-4.9	-5,402	-3.1
Finance and insurance	-9,121	-16.4	-1,668	-13.2	-3,007	-15.3
Real estate	-458	-1.3	+735	+12.1	-14	-0.2
Eating and drinking places, accommodations	-5,821	-3.0	+1,208	+3.0	+848	+1.5
Medical, health care and welfare	+43,182	+39.6	+11,559	+42.1	+14,623	+22.0
Education, learning support	+5,721	+9.8	+2,866	+29.4	+1,056	+8.3
Compound services	-2,388	-22.6	-356	-7.1	+234	+2.3
Services (not elsewhere classified)	+27,668	+9.9	+8,084	+12.6	+6,186	+7.4
All industries	-10,567	-0.6	-3,794	-0.7	-5,248	-0.8

Source: Compiled from Statistics Bureau, Ministry of Internal Affairs and Communications (2006).

compound services.

3. Factors Improving the State of Employment in the Six Prefectures

In the preceding subsection, we looked at six prefectures with a relatively favorable state of employment in 1999-2004 and picked up "particular developments different from the national trend" that could be observed in these prefectures. These "particular developments" can be considered as unique factors improving the state of employment that had an effect in the six prefectures. Table 5 summarizes these factors.

Table 5 categorizes industries according to the three patterns of increase/decrease in the number of employees by prefecture ("the industries in which the number of employees increased in the majority or all of prefectures,"

Table 5. Factors for improving the state of employment in six prefectures with favorable state of employment

Industry	Okinawa	Tokyo	Nara	Chiba	Shiga	Kumamoto
Industries in which employees increased						
Medical, health care and welfare			○	○	○	
Education, learning support					○	
Services (not elsewhere classified)		○			○	
Industries in which increase/decrease differed from prefecture to prefecture						
Agriculture	○			○	○	
Real estate		○			○	
Information and communications	○	○				
Eating and drinking places, accommodations		○	○		○	○
Transport				○		○
Compound services			○			○
Industries in which employees decreased						
Manufacturing	○	○			○	○
Construction	○	○		○		
Wholesale and retail trade	○		○	○		○

Note: Industries in which there were developments that were different from the national trend and that contributed to improving the state of employment are marked with "○."

"the industries in which the increase/decrease in the number of employees differed from prefecture to prefecture," and "the industries in which the number of employees decreased in the majority or all of prefectures") mentioned above. With this in mind, if we extract factors improving the state of employment that commonly had an effect in the six prefectures with a relatively favorable state of employment, it will be as shown below.

Firstly, there are three factors that had an effect in four out of six prefectures (factors with four circles in Table 5):

(i) Increase in the number of employees in eating and drinking places and accommodations, which was "an industry in which the increase/decrease in the number of employees differed from prefecture to prefecture,"

(ii) Low rates of reduction in the number of employees in the manufacturing industry, which was "an industry in which the number of employees decreased in all prefectures" (in other words, relative success of the manufacturing industry in the four prefectures), and

(iii) Exceptional increase or low rates of reduction in the number of employees in wholesale and retail trade, which was "an industry in which the number of employees decreased in the majority of prefectures" (in other words, relative success of the wholesale and retail trade industry in the four prefectures).

There are also three other factors that had an effect in three out of six prefectures (factors with three circles in Table 5):

(iv) High rates of increase in the number of employees in medical, health care and welfare, which was "an industry in which the number of employees increased in all prefectures,"

(v) High rates of increase in the number of employees in agriculture, which was "an industry in which the increase/decrease in the number of employees differed from prefecture to prefecture," and

(vi) Low rates of reduction in the number of employees in the construction industry, which was "an industry in which the number of employees decreased in all prefectures" (in other words, relative success of the construction industry in the three prefectures)

(i) to (vi) above can be considered as positive factors that generated regional divergences in improvement in the state of employment in Japan from 1999 to 2004.[3] It can be said that (i) to (vi) provide the clues to extracting the mechanisms for recovery of regional economies that lead to job creation.

IV. Mechanisms for Recovery of Regional Economies

1. Two Models Extracted in "Community Based Economic Renaissance"

With regard to the mechanisms for recovery of regional economies, we published *Community Based Economic Renaissance* (Kikkawa and RENGO-RIALS 2005) as a result of investigations and research carried out from 2002 to 2004 in a project organized by the RENGO-RIALS titled, "Research on Changes in Industrial Structure and Regional Economies." The analytic method used in the above publication was characteristic in that it gave

[3] Obviously, by focusing on the prefectures in which the state of employment deteriorated from 1999 to 2004 in Japan, it is possible to extract negative factors that generated regional divergences in improvement in the state of employment. However, because the objective of this paper is "to identify the conditions of regional recovery that lead to job creation," we concentrate on the analysis of the positive factors.

emphasis to and integrated the regional perspectives and employment perspectives.

Kikkawa and RENGO-RIALS (2005) focused on regional areas because they were just the suitable subjects of analysis in case studies that tried to seek out, from successful cases, the logic of recovery with wide applications based on a micro-level approach. When companies are made the subject of analysis, among which the gap between the "winners" and "losers" are widening, it is generally difficult to apply the lessons learned from the successes of the "winners" to the "losers," in other words, to generalize the lessons. In contrast, since regional communities share the commonality of being a place where citizens live, it is relatively easy for regional communities to learn from successful experience of advanced regional communities. Moreover, research results that are being accumulated in recent years on (a) the theory of industrial accumulations (Itami, Matsushima, and Kikkawa 1998, etc.), (b) the theory of industrial clusters (Yamasaki 2002, etc.), and (c) the theory of networks of small- and medium-sized enterprises (Nishiguchi 2003, etc.) has indicated that regional communities can be important centers for reinforcement of industrial competitiveness.

It should, however, not be overlooked that the research on (a), (b) and (c) above carried out by the authors of the chapters of Kikkawa and RENGO-RIALS (2005) (Shigeru Matsushima, Akira Yamasaki, Toshihiro Nishiguchi, and Takeo Kikkawa) developed arguments in depth about reinforcing industrial competitiveness based on regional communities, but did not necessary have a clear view on linking that to the macro-level outcomes of job creation. From this reflection on the past research, Kikkawa and RENGO-RIALS (2005) gave emphasis to the employment perspective. It aimed to actively link (i) the regional perspective and (ii) employment perspective and present the logic of the recovery of the Japanese economy that begins with a micro-level approach and then generates macro-level outcomes.

What kind of mechanisms that create the virtuous cycle of reinforcement of industrial competitiveness and employment creation did Kikkawa and RENGO-RIALS (2005) extract? The mechanisms can be broadly divided into two.

The first is the mechanism with the following developments: relative success of the manufacturing industry → revitalization of the regional economy → job creation. It typically had an effect in Shiga Prefecture and can

be called the "Shiga model."

The second is the mechanism with the following developments: innovation in the tertiary industry → revitalization of the regional economy → job creation. It typically had an effect in Nagahama City and can be called the "Nagahama model." Incidentally, it is only by coincidence that Nagahama City is located in Shiga Prefecture.

As we examined in the preceding section, factors (i) to (vi) improving the state of employment had an effect in the six prefectures with a relatively favorable state of employment in Japan in 1999-2004. Of these factors, it is highly probable that (iv) high rates of increase in the number of employees in medical, health care and welfare occurred only in metropolises and their environs.[4] While (v) high rates of increase in the number of employees in agriculture is a phenomenon that should be noted, its quantitative contribution to improving the state of employment was limited (see Tables 3 and 4). It is assumed that the relative success of the construction industry of the factor (vi) was interlinked with the trend of public investment. If we take these points into consideration, we can say that (i), (ii) and (iii) are important factors for improving the state of employment that will allow us "to seek out, from successful cases, the logic of recovery with wide applications." Of these three factors, (ii) the relative success of the manufacturing industry is the starting point of the Shiga model extracted in Kikkawa and RENGO-RIALS (2005). (i) Increase in the number of employees in eating and drinking places and accommodations and (iii) the relative success of the wholesale and retail trade industry also overlap with the innovation in the tertiary industry, which is the starting point of the Nagahama model. In the subsections below, we review the details of the Shiga model and Nagahama model, which are closely related with the factors of (i), (ii) and (iii), in order to identify the conditions of regional recovery that lead to employment creation.

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[4] According to the Statistics Bureau, Ministry of Internal Affairs and Communications (2006), the national average rate of increase in the number of employees in medical, health care and welfare from 1999 to 2004 reached 29.0%. However, the prefectures in which the rate of increase exceeded 35% were limited to six prefectures, namely, Nara Prefecture (50.1%), Shiga Prefecture (42.1%), Chiba Prefecture (39.6%), Kanagawa Prefecture (38.8%), Hyogo Prefecture (36.7%), and Shizuoka Prefecture (35.1%).

2. Shiga Model: Industrial Accumulations Supporting the Relative Success of the Manufacturing Industry and Maintenance of Employment

As for the Shiga model, Kikkawa and RENGO-RIALS (2005) mainly focused on its functions of the industrial accumulation (manufacturing accumulation). While the contraction of industrial accumulations was frequently considered as a problem during and after the 1990s, which was known as the "Lost Decade" in Japan, it is also true that, if we closely examine the state of industrial accumulations, we can observe a number of cases in which an industrial accumulation indirectly had an effect on maintaining employment through the path of sustained vigor of the industrial accumulation → revitalization of the regional economy → securing jobs.

In Kikkawa and RENGO-RIALS (2005), we were able to use Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications (2004), which was then the latest report of the Establishment and Enterprise Census conducted by the Statistics Bureau of the Ministry of Public Management, Home Affairs, Posts and Telecommunications (the former title of the Ministry of Internal Affairs and Communications). According to Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications (2004), the number of employees in the manufacturing industry and in all industries in Japan from 1996 to 2001 decreased in all 47 prefectures and in 45 prefectures (excluding Shiga Prefecture and Okinawa Prefecture), respectively.

It should be noted, however, that in seven prefectures, namely, Iwate Prefecture, Tochigi Prefecture, Gunma Prefecture, Shizuoka Prefecture, Shiga Prefecture, Kagoshima Prefecture, and Okinawa Prefecture, the rate of decline in the number of employees in the manufacturing industry from 1996 to 2001 was relatively small, at below 10% (the national average was a decline of 13.9%). In five out of seven prefectures (Iwate, Tochigi, Gunma, Shizuoka, and Shiga), small- and medium-sized enterprises actively developed their business operations based on industrial accumulations in the respective regions of Hanamaki-Kitakami region, the region covering southeastern Gunma and southwestern Tochigi, Hamamatsu and its environs, and the southern coast of Biwa Lake, even during the period between 1996 and 2001. In these regions, the relative success of the manufacturing industry was achieved through sustained vigor of the industrial accumulations, and it was the state of these developments that each chapter of Kikkawa and RENGO-RIALS (2005) shed

light on. (Specifically, the Hanamaki-Kitakami region is dealt with in Chapter 3 by Tsujita [2005], in Chapter 5 by Yamasaki [2005], and in Chapter 6 by Nishiguchi and Tsujita [2005]; southeastern Gunma is dealt with in Chapter 1 by Matsushima [2005]; Hamamatsu and its environs in Chapter 3 by Tsujita [2005]; and the southern coast of Biwa Lake in Chapter 7 by Kikkawa [2005a]).

In Shiga Prefecture, for example, the entire prefecture can be regarded as a wide-area industrial accumulation centered on the southern coast of Biwa Lake. In Shiga Prefecture, small- and medium-sized manufacturing businesses, centered on medium-sized plants, maintained their vigor by the following method:

> For medium-sized plants to maintain their vigor in Shiga Prefecture, "survival by diversifying customers" had an important meaning…. As can be understood from the case of the eastern Ohmi region, major manufacturers of a broad range of industries, including automotive, consumer electronics, machinery and apparatus, and chemical engineering, built plants in Shiga Prefecture. A medium-sized firm that at first supplied its products to a major manufacturer raises its technology level and begins to supply the products to another major manufacturer. By diversifying the industries of its customers, this medium-sized firm can smoothen out the effect of economic fluctuations to a certain extent. (This point can more easily be understood if one would recall, for example, that at the time when the recession of the semiconductor industry was becoming more serious in Japan in 2001, the automobile industry was showing steady growth.) It can be considered that medium-sized plants "continued to survive by diversifying their customers" and maintained their vigor. (Kikkawa 2005a, 202-3)

The mechanism whereby the "robustness" of a regional economy is created from the diversity of industrial structure and small- and medium-sized enterprises' strategy of taking advantage of that diversity, as in the case of Shiga Prefecture, was also observed in the region covering southeastern Gunma and southwestern Tochigi (Matsushima 2005).

On the other hand, in Hamamatsu and its environs in Shizuoka Prefecture

and in Hanamaki-Kitakami region in Iwate Prefecture, a mechanism of entrepreneurship and new business creation, which was characterized by procurement by and interaction among members of a network, was effective. While these two regions were in "contrast with each other with respect to history and size," they showed "surprisingly similar" trends as regards training and turning out people supporting the industrial accumulations and as regards interaction between "explicit knowledge" and "tacit knowledge" (Tsujita 2005).

Another point that should be noted from Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications (2004) is that in the seven prefectures in which the rate of decline in the number of employees in the manufacturing industry from 1996 to 2001 was relatively small and in which the manufacturing industry was relatively successful, namely, Iwate Prefecture, Tochigi Prefecture, Gunma Prefecture, Shizuoka Prefecture, Shiga Prefecture, Kagoshima Prefecture, and Okinawa Prefecture, the rate of decline in the number of employees of all industries was also generally lower. The average rate of decline in the number of employees of all industries in the seven prefectures was 1.3%, which was 2.9 points lower than the national average of 4.2%.

Among the seven prefectures, it should be particularly noted that in Shiga Prefecture, in which the relative success of the manufacturing industry was realized through sustained vigor of the industrial accumulation, the number of employees of all industries increased exceptionally from 1996 to 2001 (the rate of increase was 0.8%).[5] The increase in the number of employees in Shiga Prefecture was realized through the interrelation of sustained vigor of the industrial accumulation → the success of the manufacturing industry → expansion of the manufacturing-related service industry → expansion of employment in the manufacturing-related service industry → expansion of employment in commerce and restaurants → increase in the number of employees in the prefecture as a whole. This interrelation can be summed up as sustained vigor of the industrial accumulation → revitalization of the

[5] In the case of Okinawa Prefecture, in which the number of employees also rose exceptionally from 1999 to 2001, the success of the construction industry from public works, etc. was more significant than the success of the manufacturing industry (Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications 2004).

regional economy → securing jobs. Shiga Prefecture was a typical case in which "an industrial accumulation indirectly had an effect on maintaining employment," and Kikkawa and RENGO-RIALS (2005) called it the "Shiga model" (Kikkawa 2005a).

Table 2, shown above, shows the rate of increase in the number of employees by prefecture from 1999 to 2004 for both all industries and the manufacturing industry. The shaded figures in the "All industries" column are those of prefectures in which the percentage change was positive or in which the rate of decline was smaller than the national average. The shaded figures in the "Manufacturing industry" column are those of prefectures in which the rate of decline was less than 10%. As shown in the table, of the 12 prefectures in which the rate of decline in the number of employees in the manufacturing industry was less than 10%, the number of employees of all industries increased or if it decreased, the rate of decline was lower than the national average in all those prefectures except Mie Prefecture.[6] Since the national average in the rate of decline in the number of employees in the manufacturing industry was 11.8%, it can be said that the manufacturing industry was relatively successful in the 12 prefectures in which the rate of decline was less than 10%. This means that Table 2, which was compiled from Statistics Bureau, Ministry of Internal Affairs and Communications (2006), which was published after Kikkawa and RENGO-RIALS (2005), confirms the fact that relative success of the manufacturing industry is an important factor in maintaining a favorable state of employment. While the task of elucidating the mechanism for recovery of regional economies that had an effect in these 12 prefectures must be left to another time, it is without doubt that the "Shiga model" presented in this paper will provide meaningful implications in the process of elucidation.

3. Nagahama Model: Job Creation through Innovation in the Tertiary Industry

The mechanism for recovery of regional economies that has its starting point in innovation in the tertiary industry typically had an effect in Nagahama

[6] Even in Mie Prefecture, the rate of decline in the number of employees of all industries from 1999 to 2004 was only 0.1 point higher than the national average (see Table 2).

City. Since the mid-1980s, community development has been carried out in Nagahama City through the participation of its citizens. The project has been so successful that the city has often received awards for serving as a national model. At the center of the project is Kurokabe Inc., a joint public-private venture established in April 1988. The annual number of visitors to Kurokabe Square in the center of Nagahama City surpassed 2 million in FY2001.

Why did Nagahama City succeed in community development? Two main reasons can be mentioned.

The first is that the city effectively utilized the resources within the city. The success of Kurokabe Square, which attracts more than 2 million visitors a year, was the result of bringing together and appropriately combining the tourist resources of the historic black building wall (*kurokabe*) and Hokkoku-kaido Road, financial resources provided by eight local private citizens who each financed ¥10 million to ¥15 million for the establishment of Kurokabe Inc.,[7] and the favorable geographical location providing easy access by the new express from the three major cities in the Kansai region (Kobe, Osaka and Kyoto). It is also noteworthy that during the process of achieving success, the citizens' volunteer activities, which inherited the tradition of the merchants' culture dating back to the reign of Hashiba Hideyoshi in the 16th century, played a major part. Those who took part in the citizen-led redevelopment of the commercial district gathered around a common axis provided by "Machidukuri Yakuba," an organization that was recognized as an NPO in November 2003.

The second is that Nagahama City achieved economic success by exploiting demand from external market. Because the city is recognized as a national model for vitalization of the downtown commercial district, it is sometimes misunderstood that local people of the city began to shop again in the commercial district near the railroad station. As in other local cities, it is basically the large shopping centers situated along the suburban thoroughfare that continue to attract the purchasing power of Nagahama City citizens. Those who provided the driving force to opening the closed shutters of the stores in the downtown commercial district were the day-trippers from Kobe, Osaka, and Kyoto who came to visit the shopping streets located close to Nagahama

[7] Kurokabe Inc. had a capital of ¥130 million at the time of its foundation. The remaining ¥40 million came from Nagahama City.

railroad station. In Kurokabe Square in recent years, the tourists' trend to spend less has become more marked, and sales per tourist are declining, resulting in the problem of "increased number of visitors but decreased sales." This issue stems from the fact that the development of the commercial district is supported by demand from the outside the city.

The case of Nagahama City clearly shows that innovation in the tertiary industry can be a starting point in the recovery of regional economies. Nagahama City is a major city in Kohoku (northern coast of Biwa Lake) region of Shiga Prefecture. Due to the sluggishness of business at Kanebo Textile, Ltd.'s Nagahama Plant, the Kohoku region has a manufacturing industry that is the most lackluster in all of Shiga Prefecture. From 1996 to 2001, the Kohoku region had the largest decline in the number of employees in the manufacturing industry (a decline of 5,140) among the prefecture's seven regions, and, as a result of that, the number of employees in all industries also fell (a decline of 1,529). Nevertheless, we should not overlook the fact that during the same period, the number of employees in commerce and restaurants and the service industry in the Kohoku region increased considerably (by 1,607 and 3,147, respectively). Both of these increases were second only to those recorded in the Konan (southern coast of Biwa Lake) region in a comparison of the prefecture's seven regions.[8] It would not be a gross mistake to say that Nagahama City's success in community development was one of the reasons for the increase.

The case of Nagahama City brings to the surface another mechanism for recovery of regional economies, one different from the Shiga model mentioned above, of innovation in the tertiary industry → revitalization of the regional economy → increase in the number of employees. Kikkawa and RENGO-RIALS (2005) called this the "Nagahama model" (Kikkawa 2005a). The "Nagahama model" gives us important implications for improvement in the state of employment in regional communities that will have innovation in the tertiary industry as the starting point to recovery.

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[8] The data on the increase/decrease in the number of employees in Shiga Prefecture by region from 1996 to 2001 are from Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications (2004).

V. Conclusion: Conditions of Regional Revitalization of the Type Leading to Job Creation

The objective of this paper is to "identify the conditions of regional recovery that lead to job creation." In pursuing this objective, we started off by noting the fact that regional divergences were widening during the process of Japan's economic recovery that began in 2002. We then analyzed the increase/decrease in the number of employees by industry in six prefectures with a relatively favorable state of employment in 1999-2004 (Okinawa Prefecture, Tokyo Metropolis, Nara Prefecture, Chiba Prefecture, Shiga Prefecture, and Kumamoto Prefecture), and gained an understanding that relative success of the manufacturing industry and innovation in the tertiary industry (business expansion of restaurants and accommodation industry, relative success of wholesale and retail trade, etc.) were important factors for improving the state of employment. We then presented two models of recovery of regional economies: the "Shiga model," which starts with the relative success of the manufacturing industry, and the "Nagahama model," which starts with innovation in the tertiary industry.

Two elements constituting the "Nagahama model" are extremely suggestive as regards the objective of "identifying the conditions of regional recovery that lead to job creation." The two elements are (i) effective utilization of intraregional resources and (ii) exploitation of demand from external market. It is considered that these two elements can also be found in industrial accumulations, which played a central role in the "Shiga model." This is because, as already mentioned at another opportunity, "in industrial accumulations, a unique mechanism consisting of two pillars of the 'effect of intra-accumulation division of labor' and the 'interrelation between the accumulation and the market' is at work, and these generate their own economic rationality," and, moreover, "the two pillars subsumes the self-preserving functions of 'continuous generation of entrepreneurship' and 'accumulation of expertise and boosting of reputation,' respectively" (Kikkawa 2005b, 81). It can be considered that of these two pillars mentioned, the effect of intra-accumulation division of labor corresponds to the effective utilization of intraregional resources of (i) above, and the interrelation between the accumulation and the market to include exploitation of demand from external market of (ii).

From the discussion of this paper, (i) effective utilization of intraregional resources and (ii) exploitation of demand from external market can be mentioned as conditions of regional recovery that lead to job creation. It should, however, be clearly borne in mind that it takes considerable time for a regional community to learn from the mechanisms of economic revival that worked in other advanced regions and based on the knowledge to achieve regional revitalization that lead to job creation. The medium-sized plants and other small- and medium-sized manufacturers that became the core of the Shiga model took several decades, starting in the period of Japan's rapid economic growth, to diversify their customers. Kurokabe Inc., which was the key player in the Nagahama model, was established 20 years ago in 1988. Regional revitalization of the type leading to job creation cannot be realized overnight.

References

Cabinet Office. 2006. 2006 nen 7 gatsu Getsurei Keizai Hokoku Shuyo Keizai Shihyo [Main economic indicators from the monthly economic report of July 2006].

Itami, Hiroyuki, Shigeru Matsushima, and Takeo Kikkawa, eds. 1998. *Sangyo shuseki no honshitsu* [The essence of industrial accumulations]. Tokyo: Yuhikaku.

Kikkawa, Takeo. 2005a. Chiiki keizai no kasseika to koyo no soshutsu [Revitalization of regional economies and job creation]. In *Chiiki karano keizai saisei: Sangyo shuseki, inobeshon, koyo soshutsu* [Community based economic renaissance: Industrial accumulations, innovation, and job creation], ed. Takeo Kikkawa and RENGO-RIALS, 193-215. Tokyo: Yuhikaku.

———. 2005b. Sangyo kudoka: Sabisu keizaika to chusho kigyo mondai ['Hollowing out of industry': The rise of the service economy and the issue of small- and medium-sized enterprises]. In *'Ushinawareta junen' wo koete [1]: Keizai kiki no kyokun* [Beyond the 'lost decade' volume 1: The lessons of economic crisis], ed. Institute of Social Sciences, University of Tokyo, 75-102. Tokyo: University of Tokyo Press.

Kikkawa, Takeo and RENGO-RIALS (Research Institute for Advancement of Living Standards), eds. 2005. *Chiiki karano keizai saisei: Sangyo shuseki, inobeshon, koyo soshutsu* [Community based economic renaissance: Industrial accumulations, innovation, and job creation]. Tokyo: Yuhikaku.

Matsushima, Shigeru. 2005. Sangyo kozo no tayosei to chiiki keizai no 'gankyo'sa [Diversity of industrial structure and 'robustness' of regional economy]. In *Chiiki*

karano keizai saisei: Sangyo shuseki, inobeshon, koyo soshutsu [Community based economic renaissance: Industrial accumulations, innovation, and job creation], ed. Takeo Kikkawa and RENGO-RIALS, 11-36. Tokyo: Yuhikaku.

Nishiguchi, Toshihiro, ed. 2003. *Chusho kigyo netto waku* [Small-firm networks]. Tokyo: Yuhikaku.

Nishiguchi, Toshihiro and Motoko Tsujita. 2005. Chusho kigyo netto waku no nichi-chu-ei hikaku [Comparison of networks of small- and medium-sized enterprises in Japan, China and the UK]. In *Chiiki karano keizai saisei: Sangyo shuseki, inobeshon, koyo soshutsu* [Community based economic renaissance: Industrial accumulations, innovation, and job creation], ed. Takeo Kikkawa and RENGO-RIALS, 159-89. Tokyo: Yuhikaku.

Statistics Bureau, Ministry of Public Management, Home Affairs, Posts and Telecommunications. 2004. 2001 *Establishment and Enterprise Census of Japan.*

Statistics Bureau, Ministry of Internal Affairs and Communications. 2006. *2004 Establishment and Enterprise Census of Japan.*

Tsujita, Motoko. 2005. Sangyo shuseki niokeru shinsangyo no soshutsu [Creation of new industries in industrial accumulations]. In *Chiiki karano keizai saisei: Sangyo shuseki, inobeshon, koyo soshutsu* [Community based economic renaissance: Industrial accumulations, innovation, and job creation], ed. Takeo Kikkawa and RENGO-RIALS, 63-93. Tokyo: Yuhikaku.

Yamasaki, Akira, ed. 2002. *Kurasuta senryaku* [Strategy for creating industrial clusters]. Tokyo: Yuhikaku.

———. 2005. Henyo suru nihon-gata sangyo shuseki [Japanese industrial accumulations in transition]. In *Chiiki karano keizai saisei: Sangyo shuseki, inobeshon, koyo soshutsu* [Community based economic renaissance: Industrial accumulations, innovation, and job creation], ed. Takeo Kikkawa and RENGO-RIALS, 129-57. Tokyo: Yuhikaku.

A Convergence Analysis on the Efficiency of Public Job Placement Services in Japan*

Yanfei Zhou
The Japan Institute for Labour Policy and Training

I. Introduction

Public job placement services assist in "pairing together" job offers with job seekers. The aim is to mass-produce high quality jobs meeting the requirements of both parties and to help the "underdogs in the employment market" by bearing the "pairing costs," or job-searching costs of both parties. The provision of unemployment benefits is a passive policy in the labor market, while public job placement services are typically an active policy, since the government is actively involved in the labor market.

Public job placement services hold a particularly critical position among Japan's employment policies. As shown in Table 1, over 60% of expenditures for active employment measures are allocated to public job placement services in Japan. In European countries, apart from the UK, these services account for less than 20%, and in the US, the ratio is less than 30%. Unlike Canada, Denmark, Germany and the US, where the government places greater emphasis

Table 1. Ratio of public job placement services among total active employment policies (%)

Country	Period	Public job placement services	Job training	Measuers for unemployed youth	Employment assitance services	Employment measures for the disabled
Japan	2000-01	62.5	9.4	-	25.0	3.1
Australia	2000-01	44.4	4.4	15.5	24.4	11.1
Canada	2000-01	41.5	41.5	4.9	7.3	4.9
Denmark	2000	7.6	54.1	6.4	10.8	21.0
France	2000	13.7	19.1	32.1	28.2	6.9
Germany	2000	19.2	28.3	7.5	20.8	24.2
Norway	2001	15.2	7.6	1.3	1.3	74.7
UK	1999-2000	36.1	13.9	41.7	2.8	5.5
US	2000-01	26.7	26.7	20.0	6.7	20.0

Source：*OECD Employment Outlook.*

* This paper is a revised version of Zhou (2007).

on job training, Japan places greater emphasis on pubic job placement services.

As of 2004, there were as many as 477 public job placement agencies (615 including local and branch offices) in Japan.[1] These agencies provide free job introduction services to individuals residing throughout Japan (See Appendix 1 for distribution of public job placement agencies and offices). Job placement offices are managed and operated in a standardized manner by the government. And they are valued for being able to share information on employers and job seekers nation-wide and to provide free employment introduction services to a wide range of areas. If all information is shared and labor mobility costs are nonexistent, one's chances of finding a job (placement rate as a macro-economic indicator) would theoretically remain unchanged regardless of the job seeker's location. Also, companies would theoretically have the same chance of discovering a job-seeker meeting the necessary requirements (rate of filled vacancy as a macro-economic indicator) regardless of their location. However, theories do not necessarily hold due to various friction costs and external influence. If public job placement agencies functioned perfectly, the placement rate and rate of filled vacancy in each region would converge. This is because both job-seekers and companies would move to locations where there are more chances of finding employment or workers, at least in the medium to long term.

Is it possible to substantiate the convergence trend in matching efficiency rates for public job placement services based on actual data? If the convergence can be verified, one could argue that the labor matching system in Japan is by and large functioning normally. In this case, the government-led public job placement services could be valued, to an extent, in reducing inequalities in employment opportunities amid the various regions and increasing nation-wide job matching. On the other hand, if the convergence is not occurring, the imperfection most likely remains in the matching system. In this case, the root of such imperfections should be studied in detail—slow labor flow, inadequate sharing of job information, or inconsistencies in labor productivity among the various agencies, etc. and the situation should be improved.

Though the issue of matching efficiency converging has extremely important implications for government policies, as explained above, to this day it has

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[1] Source: Official website of the Ministry of Health, Labour and Welfare, http://www.mhlw.go.jp/kyujin/hwmap.html.

almost never been studied. This may be due to a previous lack of academic interest in evaluating matching efficiency, since the job placement service market was practically monopolized by the government. Private participation was strictly limited before the Employment Security Act was revised in 1997. However, the law was, in fact, revised and further deregulation of job placement services is expected in the future. Evaluating the matching efficiency of public job placement services and making regional and public-private comparisons is, thus, a highly important and significant task.

This paper analyzes the trend in regional gaps in the matching efficiency of public job placement services based on prefectural data gathered after the second half of the 1990's, when full scale deregulation of the job placement market began. Section II explains the existing surveys and approaches of this paper, Section III states the basis for selection of indicators for matching efficiency, Section IV verifies the convergence of matching efficiency amid regional blocks, Section V compares the convergence of matching efficiency and labor flow, Section VI analyzes the causes of rigidity in matching efficiency and regional gaps, and the conclusion is summarized in Section VII.

II. Existing Studies on the Effectiveness of Job Placement Services and the Significance and Effect of Public Job Placement Services

Yavas (1994) initiatively proved the effectiveness of job placement agencies within the labor market in theory'. According to this study, both job seekers and employers constantly face two realities in the job market. One is "uncertainty." Employment is not guaranteed no matter how hard the search. The other is "externality." As job seekers exert more and more effort, their chances of finding vacancies meeting their requirements increase, thus providing a positive economic externality to employers, and vice versa. It is believed that job placement agencies bring something extra to society (benefits) by reducing this "uncertainty" and increasing the economically external action otherwise known as "job matching."

Cahuc and Zylberberg (2005) carried out a theoretical analysis on the best number of job placement agencies and the significance of public job placement services.[2] The best number of job placement agencies is determined by finding

[2] According to Cahuc and Zylberberg (2005), the costs of job placement services (TC)

Table 2. Regulation of free job placement services by country in the first half of the 1990's

Country	Regulation	Registration rate (%)
Japan	Government monopoly	73
Germany	Government monopoly	27
Belgium	Government monopoly	25
Spain	Government monopoly	19
US	Government and private	9
France	Government monopoly	28
Sweden	Government monopoly	36
UK	Government and private	33

Source: Walwei (1996, 143).

Note: Registration rate = Job offers registered at public job placement agencies/total job offers.

the point where the additional cost of establishing another agency (marginal cost) and potential added income (marginal income) are equal. If regulations placed on the participation of profit-making job placement agencies were completely removed, such agencies would continue to enter the market until the marginal profit reached zero, and would become excessive in number. It is believed that job placement agencies should be managed by the government in order to avoid overproduction of placement agencies as well as to assess the job-search efforts of unemployment benefit receivers. In fact, according to Walwei (1996), in the majority of advanced countries such as Japan, Germany and France,[3] the government monopolizes free job placement services (see Table 2). Particularly in Japan, there is a high registration rate (the ratio of job offers

can primarily be divided into fixed costs (Co) and variable costs (Cv). Co relies on the number of job placement agencies in the area while Cv relies on the number of placement cases dealt with by respective agencies. Fixed costs continue to rise as the number of agencies increase due to congestion. Variable costs increase initially in accordance with the number of placement cases, but begin decreases later on due to economy of scale.

3 The US and UK allow the entrance of private companies, while simultaneously implementing public job placement services. Due to deregulation, there has been an accelerated trend of private companies participating in the Japanese market since the second half of the 1990's. After the Employment Security Act Enforcement Regulations were revised in 1997, all sectors in Japan became subject to private fee-based job placement services, with the exception of harbor and construction. Also many private companies that dispatch workers entered the fee-based job placement service market following the introduction of the "Temp to Perm System" in 2000.

registered at public job placement agencies/total job offers) at free job placement services and a high ratio of public job placement services.

In addition to theoretical analyses, there are many empirical studies on the effect of job placement agencies on employment. For example, based on survey data, Fougere, Pradel, and Roger (1999) confirmed that public job placement services improved placement rates for women, unskilled youth, or so-called "underdogs in the employment market" in France. Based on empirical data, Dolton and O'Neill (1996) evaluated the impact of the Restart Placement Program, which targeted the long-term unemployed in the UK, and reported that the placement rate of individuals receiving employment counseling services was four points higher than those not receiving such services. This research also confirmed that those receiving both unemployment benefits and employment counseling had higher placement rates. Furthermore, based on empirical data, Black et al. (2002) reported that counseling services provided by public job placement agencies in Kentucky have a positive impact on employment success. This data further illustrated that such services have a positive, albeit marginal impact on average salary.

In Japan, there has been almost no such quantitative analysis based on empirical data or survey data to test the impact of public job placement services on employment akin to that performed in Europe and the US. This is caused by difficulties accessing individual data. Nakamura (2002) authored a typical study analyzing the function of public job placement services that was based on available macro time-series data. The report indicates that since many of those reemployed through public job placement agencies are unemployed middle and old aged persons with low evaluation in the external labor market, they are more likely to receive lower wages than they were receiving prior to the job change. Kodama et al. (2004) reports that, statistically, the rate of wage growth for individuals regaining employment through personal connections or advertisements is significantly higher than that of individuals utilizing public job placement services, by using the aggregate data of the Survey on Employment Trends. Ueno, Kambayashi, and Murata (2004) focus on the fact that route selection, or whether or not an individual uses public job placement services, is not made at random. They discovered, based on a prefectural panel estimation, that the matching efficiency of public job placement services is higher in prefectures where there was low variation between the estimated and observed selection rates for public placement services. In other words, the

matching efficiency of public job placement services is higher in prefectures where there is an accurate forecast model of the route selection pattern of the reemployed.[4] Ueno, Kambayashi, and Murata (2004) use the "introduction success rate" instead of "placement rate" or "rate of filled vacancy" as the indicator for matching efficiency. However, the introduction success rate may not necessarily be a suitable indicator of matching efficiency as it tends to drop in agencies striving hard to introduce jobs to job seekers, as indicated in Section III. Thus, this paper uses the less problematic "placement rate" and "rate of filled vacancy" as indicators of matching efficiency. It will also include the "policies of individual public job placement agencies" (not considered in Ueno, Kambayashi, and Murata [2004]) as an explanatory variable in the matching function, followed by an analysis of its impact. Existing surveys indicate several reasons for the gap in matching efficiency, but there has been no analysis to determine whether the gap is expanding or contracting in a time-series comparison. This paper will, therefore, attempt to verify whether the gap in matching efficiency for public job placement services has been expanding or contracting in recent years, and subsequently determine the cause of such a trend.

III. Selection of Indicators

How should the matching efficiency of public job placement services be measured? Public statistics such as those detailed in the Labor Market Annual Report often use two indicators, i.e., placement rate and rate of filled vacancy. Placement rate is calculated by dividing placement cases by (new) job seekers[5] and indicates what percentage of job seekers they successfully reemployed and hence could be regarded as an index for the quantity of matching services for

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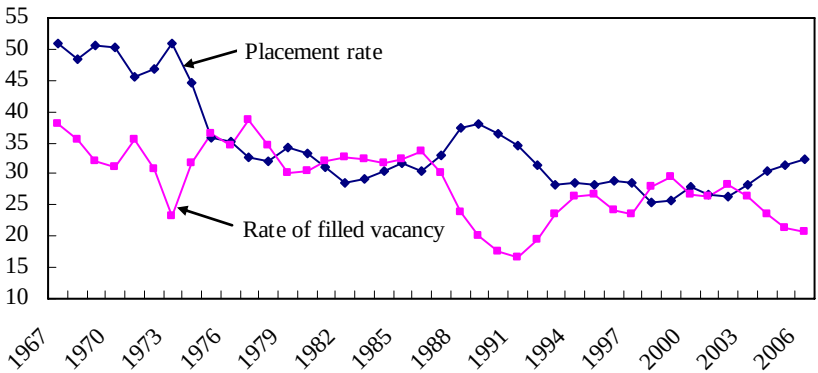
4 The paper does not indicate the reasons. I estimate that accurate forecast of route selection means that those with high possibility to become users of public job placement services, estimated from individual attributes, do actually use the services. It is considered that public job placement agencies have higher matching efficiency as they are used to deal with a lot of specific types of job seekers or they have their own know-how of job introduction. This indicator of 'accurate forecast' is specially recalculated for each prefecture based on individual data of the employed. Such data is not made available for public and this paper does not use it for analysis.

5 Placement rate was calculated by dividing placement cases by effective job-seekers in the *Labor Market Annual Report* before 1998.

Figure 1. Time-series trend in placement rate and rate of filled vacancy (1967-2006)



Source: Created by the author based on *Labor Market Annual Report* (1967-2006).

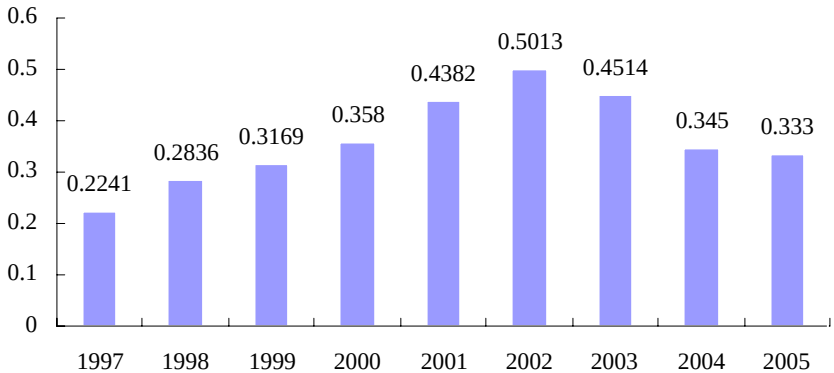
job seekers. Rate of filled vacancy, on the other hand, is calculated by dividing the number of placement cases by the number of (new) job offerings, and indicates what percentage of job-offers was filled and hence could be regarded as an index for the number of matching services for employers.

As Iwamoto (2005) noted, the placement rate and rate of filled vacancy tend to be inversely proportionate to one another due to an effective job offer-job seeker ratio. Figure 1 essentially confirms this trend. The gap between the two was exceedingly large from 1967-1974 and again from 1988-1993. Evaluation of job placement services will, therefore, differ depending upon the rate selected for the time-series data.

It is interesting to note that prefectures with a high (low) rate of filled vacancy do not necessary have a low (high) placement rate, as is indicated by cross-sectional data categorized by prefecture. As explained in Table 4 below, only Yamanashi prefecture has both a "low rate of filled vacancy and high placement rate," and no prefecture has both a "high rate of filled vacancy and low placement rate." In fact, the correlation coefficient of the rate of filled vacancy and placement rate of the prefectures surveyed is small (R=0.3376),[6] and is a positive, not negative, correlation. Figure 2 indicates that there is a

[6] It is the average of annual correlation coefficient of 1995-2005. The correlation coefficient used in this paper indicates "Pearson product-moment correlation coefficient," unless otherwise mentioned.

Figure 2. Trends in the correlation coefficient of placement rate and rate of filled vacancy based on prefectural data (1997-2005)



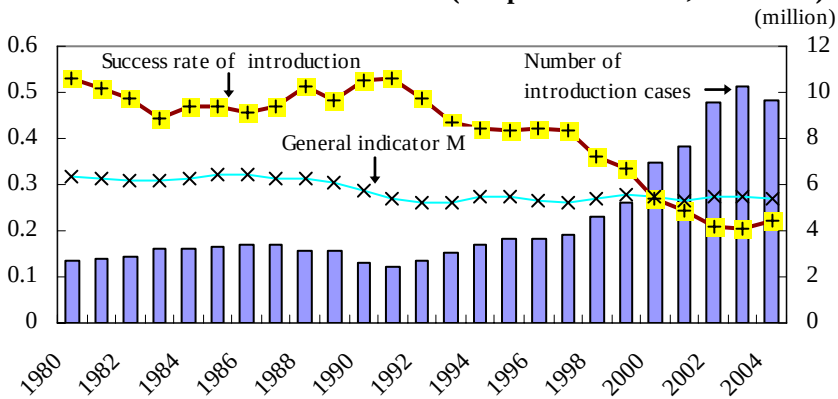
Source: Created by the author based on *Labor Market Annual Report* (1997-2005).
Note: All statistical data excludes general workers, total number of men and women, recent graduates and part-time workers.

positive correlation between placement rate and rate of filled vacancy each year, which increased from 1997-2002 and in 2002 exceeded 0.5.

What sort of mechanisms are working to produce such opposing results based on time-series and prefectural data? One possibility is collective macro-economic shock. When a macro-economy is doing well, the effective job offer-job seeker ratio increases and the placement rate improves, while the rate of filled vacancy declines.[7] Since a macro-economic shock has a reverse impact on placement rate and rate of filled vacancy, they have a negative correlation in time-series data. In fact, an effective job offer-job seeker ratio, which seems to show collective shock, has a positive and negative impact on placement rate and rate of filled vacancy, respectively, based on the estimated function of the two rates (see Table 5 for detailed results). Once could interpret

[7] In medium to long-term span of period, both placement rate and rate of filled vacancy wound improve under brisk macro-economic conditions. It is because increase in new job offers would trigger employment activity of some of those who have given up on getting a job. Increase in job offers would not increase the number of job seekers immediately as it takes time for potential job seekers to hear the news. In fact, there is a positive correlation between placement rate and rate of filled vacancy based on time-series data of 1967-2005 with two years' lag time (r=0.4834). It may be interpreted that such a lag explains the difference of correlation between cross-sectional analysis and time-series analysis.

Figure 3. Time-series trend of general matching indicator M and introduction success rate (comprehensive data, 1980-2004)



Source: Created by the author based on *Labor Market Annual Report* (1980-2004).
Note: The left axis indicates the value of general matching indicator M and introduction success rates (lines), and the right axis indicates the number of introduction cases (bars).

this to mean that macro-economic shock causes placement rate and rate of filled vacancy to move inversely proportionate to one another in time-series data. Meanwhile, it could be interpreted that the two rates within the prefectural data may have maintained the original correlation, unaffected by collective shock, due to the availability of correlation data for several prefectures during the same year.

Matching indicator (M), or a combined indicator of placement rate and rate of filled vacancy, is used in documents such as the White Paper on Labor Economy. Such an indicator[8] is problematic, however, since movement of the placement rate and rate of filled vacancy offsets each other and the reality of the gap among regions or throughout time becomes underestimated (see Figure 3). Ueno, Kambayashi, and Murata (2004) evaluated the efficiency of public job placement services using the indicator, "introduction success rate (placement cases/introduction cases)."[9] This indicator also relies largely on the number of introductions, which is used as the denominator. Its shortcomings lie

[8] If a is placement rate and b is rate of filled vacancy, M is defined as the following:
$M_{it} = \sqrt{a_{it}^2 + b_{it}^2} / \sqrt{2}$ i=1,2,…N region t=1,2,…M time point
[9] It is also called "appointment rate."

in the fact that enthusiastic agencies achieve lower success rates as they tend to introduce a large number of jobs. In fact, as is evidenced in Figure 3, the introduction success rate for total public job placement agencies largely declined after 1992, due to a sharp increase in the number of introductions.

Since both the general matching indicator and introduction success rate are inherently flawed, this paper predominantly utilizes placement rate and rate of filled vacancy to evaluate the matching efficiency of public job placement services.

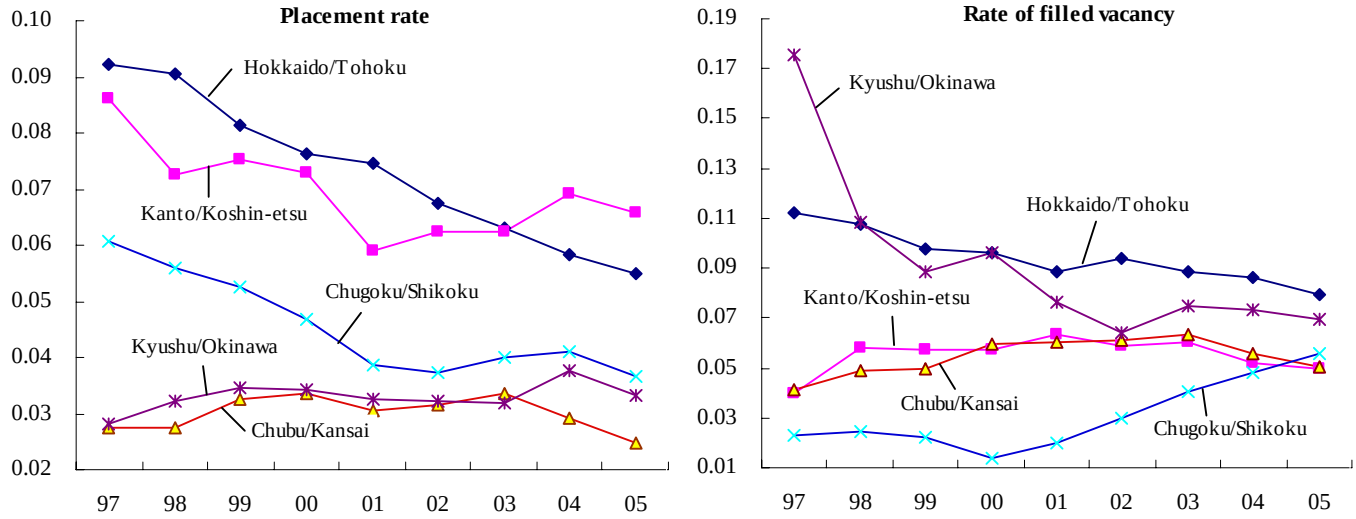
IV. Convergence of Matching Efficiency within Regional Blocks

As mentioned in the introduction, job seekers would move from regions with low placement rates to those with higher placement rates if similar jobs in each region offered similar wages and there were no labor mobility costs. Companies would also transfer plants from regions with low rate of filled vacancy to those with high rate of filled vacancy if the price of production factors, including labor costs, were the same in all regions and the plant could be moved at no cost. This would allow every region to enjoy the same placement rate and rate of filled vacancy. In reality, however, there is a significant regional gap in wages and production factor costs, and in many cases labor mobility and plant transfer costs are quite high. Standardizing placement rate and rate of filled vacancy nation-wide, thus appears to be problematic. Nonetheless, labor and plant mobility costs are low when moving between regions in geographic proximity to one another and relatively active labor flow can be expected within the same regional block. Placement rate and rate of filled vacancy within the same regional block are thus expected to gradually converge.

Figure 4 indicates the standard distribution of placement rate and rate of filled vacancy for five regional blocks from 1997-2005 (47 prefectures are divided into five regional blocks).[10] The data indicates an overall diminished gap in placement rate for each region. The convergence of placement rates within the same block is most prominent in the Hokkaido/Tohoku, Kanto/

[10] Five regional blocks are used instead of 47 prefectures or 10 administrative blocks for the sake of clarity. The same trend is observed, however, even with 10 administrative blocks.

Figure 4. Standard distribution of placement rate and rate of filled vacancy by regional block (1997-2005)



Source: Created by the author based on *Labor Market Annual Report* (1997-2005).

Note: Hokkaido and Tohoku Block (Hokkaido, Aomori, Akita, Yamagata, Iwate, Miyagi and Fukushima), Kanto and Koshin-etsu Block (Saitama, Chiba, Tokyo, Kanagawa, Ibaraki, Tochigi, Gunma, Yamanashi, Nagano, Niigata, Toyama, Ishikawa and Fukui), Chubu and Kansai Block (Gifu, Shizuoka, Aichi, Mie, Shiga, Kyoto, Osaka, Hyogo, Nara and Wakayama), Chugoku and Shikoku Block (Tottori, Shimane, Okayama, Hiroshima, Yamaguchi, Kagawa, Tokushima, Ehime and Kochi) and Kyushu and Okinawa Block (Fukuoka, Saga, Nagasaki, Kumamoto, Oita, Miyazaki, Kagoshima and Okinawa)

Koshin-etsu and Chugoku/Shikoku blocks. The standard distribution of placement rates in the Kyushu/Okinawa and Chubu/Kansai blocks remain, in effect, consistent throughout the charted period. It may be because the internal disparity was low from the start. Rate of filled vacancy converge in the Kyushu/Okinawa and Hokkaido/Tohoku blocks but no clear trend can be observed in other blocks.

V. Connection between Convergence of Matching Efficiency and Labor Flow

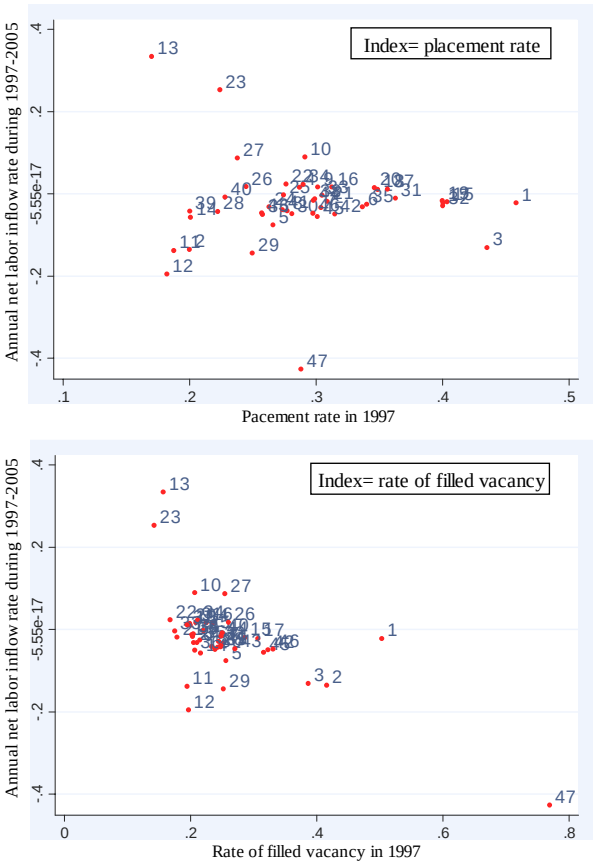
Although the convergence of placement rate and rate of filled vacancy within the same regional block was, to some extent, confirmed, can we truly claim that labor flow is the cause of this convergence?

The top chart in Figure 5 illustrates the placement rates of 47 prefectures during the benchmark year (1997) and the average annual net labor inflow rate for the following eight years (1997-2005). In general, prefectures with high placement rates in 1997 tend to have high net labor inflow rates for subsequent years, with the exception of Tokyo (No. 13), Aichi (23), Hokkaido (1) and Iwate (3). That is to say, there is a labor inflow trend in areas where the placement rate is already high. The bottom chart in Figure 5 illustrates the rate of filled vacancy during the benchmark year and net labor inflow rates for subsequent years. Although there is no clear correlation between the two, as was the case with placement rate, prefectures with high rate of filled vacancy during the benchmark year seem to have rather low net labor inflow rates in subsequent years.

A study by Barro and Sala-i-Martin (1995) explains that amenity factors such as climate, natural resources and population density have an impact on net labor inflow rates as well as salary rate and matching probability. According to their empirical analysis, which was performed in each of the 50 US states, net labor inflow rates are low in cold and highly populated areas, given other conditions constant. This implies that when other conditions remain constant, individuals prefer warm and less populated regions of the US.

What factors then determine labor flow in Japan? Table 3 is an estimation of the function of net labor inflow rates in Japan based on Barro and Sala-i-Martin's (1995) empirical model. Placement rate and rate of filled vacancy have positive and negative coefficients, respectively, making them

Figure 5. Matching efficiency in 1997 and average annual net labor inflow rate from 1997-2005



Code Table :

1	Hokkaido	25	Shiga
2	Aomori	26	Kyoto
3	Iwate	27	Osaka
4	Miyagi	28	Hyogo
5	Akita	29	Nara
6	Yamagata	30	Wakayama
7	Fukushima	31	Tottori
8	Ibaraki	32	Shimane
9	Tochigi	33	Okayama
10	Gunma	34	Hiroshima
11	Saitama	35	Yamaguchi
12	Chiba	36	Tokushima
13	Tokyo	37	Kagawa
14	Kanagawa	38	Ehime
15	Niigata	39	Kochi
16	Toyama	40	Fukuoka
17	Ishikawa	41	Saga
18	Fukui	42	Nagasaki
19	Yamanashi	43	Kumamoto
20	Nagano	44	Oita
21	Gifu	45	Miyazaki
22	Shizuoka	46	Kagoshima
23	Aichi	47	Okinawa
24	Mie		

Source: Created by the author based on *Labor Market Annual Report* (1997-2005).
Notes: 1. The horizontal axis shows placement rate and rate of filled vacancy of 1997. The vertical axis shows annual average net labor inflow rate in 1997-2005.
2. Net labor inflow rate = (inflow from the other prefectures – outflow to the other prefectures)/total placement cases.
3. All statistical data exclude general workers, total number of men and women, new graduates and part-time workers.

statistically significant. This indicates that subsequent net labor inflow rates are high in areas with high initial matching rates, i.e., areas with a high placement rate or low rate of filled vacancy. This result corresponds to that of Figure 5. Meanwhile, the coefficients of average temperature and sunlight

Table 3. Estimated net labor flow rates by prefecture (1997-2005)

	Coefficient	Standard error	t value	
Placement rate	0.4148269	0.2044434	2.03	**
Rate of filled vacancy	-0.6815068	0.1375842	-4.95	***
Population density (persons/km^2)	0.0000437	0.0000171	2.55	***
Average temperature	-0.0043887	0.0063655	-0.69	
Average sunlight hours	-0.0000079	0.0000637	-0.12	
Average disposable income per family of workers (yen/month)	-0.0000002	0.0000002	-1	
Constant	0.1894097	0.2063399	0.92	

Notes: 1. OLS Model (R-squared=0.5933).
2. The dependent variable is average annual net labor inflow rate between 1997-2005. All explanatory variables are values of the benchmark year (1997).

hours are not statistically significant, although both have a positive impact on net labor inflow rates. Unlike in the US, in Japan net labor inflow rates are higher in populated areas. This may be due to the perception that these areas have more readily available amenities such as transportation and cultural and entertainment facilities.

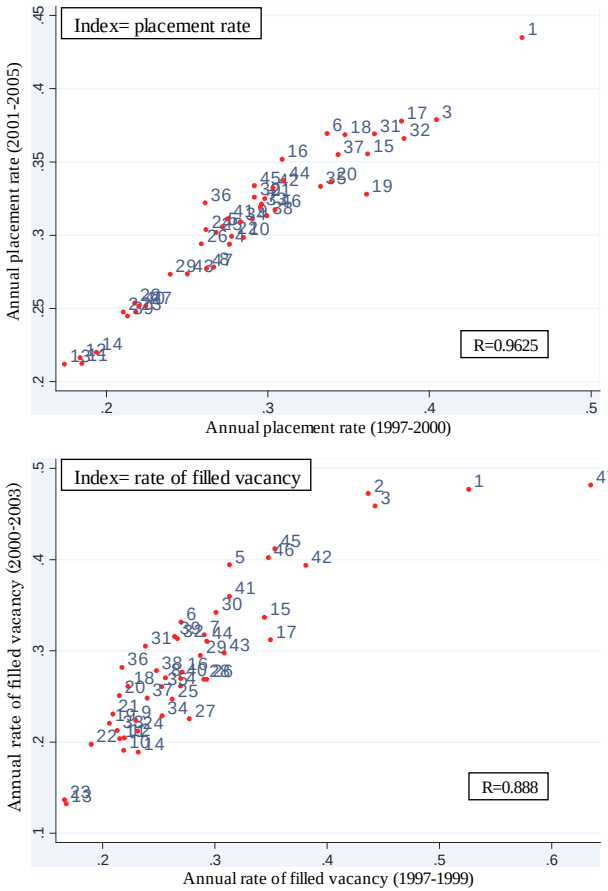
In sum, matching efficiency levels have a significant impact on labor inflow, and tend to converge within a regional block as labor moves to high matching areas (areas with a high placement rate or low rate of filled vacancy).

VI. Rigidity of Matching Efficiency and Regional Disparity

Although, to some extent, matching efficiency tends to converge, it is difficult for regional matching efficiency levels to be fully standardized due to moving costs (including amenity factors). Furthermore, while labor inflow has an impact on matching efficiency levels in each region, it takes time to gather necessary information on labor flow. Thus, it is expected that there will be a certain degree of rigidity in the matching efficiency of certain regions.

Figure 6 shows the rigidity or persistence of placement rate and rate of filled vacancy. The horizontal and vertical axes show the average placement rate (or rate of filled vacancy) during the latter half of the 1990's and first five years of the 21st century, respectively. The placement rate and rate of filled vacancy for each prefecture are plotted on the charts. There is a clear rigidity

Figure 6. Rigidity of matching efficiency by region (1997-2005)



Code Table：

1	Hokkaido	25	Shiga
2	Aomori	26	Kyoto
3	Iwate	27	Osaka
4	Miyagi	28	Hyogo
5	Akita	29	Nara
6	Yamagata	30	Wakayama
7	Fukushima	31	Tottori
8	Ibaraki	32	Shimane
9	Tochigi	33	Okayama
10	Gunma	34	Hiroshima
11	Saitama	35	Yamaguchi
12	Chiba	36	Tokushima
13	Tokyo	37	Kagawa
14	Kanagawa	38	Ehime
15	Niigata	39	Kochi
16	Toyama	40	Fukuoka
17	Ishikawa	41	Saga
18	Fukui	42	Nagasaki
19	Yamanashi	43	Kumamoto
20	Nagano	44	Oita
21	Gifu	45	Miyazaki
22	Shizuoka	46	Kagoshima
23	Aichi	47	Okinawa
24	Mie		

Source: Created by the author based on *Labor Market Annual Report* (1997-2005).
Notes: 1. The horizontal axis shows annual average of placement rate and rate of filled vacancy in 1997-2000. The vertical axis shows annual average of placement rate and rate of filled vacancy in 2001-2005.
2. All statistical data exclude general workers, total number of men and women, new graduates and part-time workers.

in both the placement rates and rate of filled vacancy. Specifically, most placement rates are distributed slightly above a 45-degree line. This indicates that placement rate for the early 2000's improved slightly in comparison to the latter half of the 1990's, but are largely affected by levels obtained in the latter of the 1999's. On the other hand, rigidity of rate of filled vacancy is not as

strong as that of placement rates. There is, however, a strong correlation between the rate of filled vacancy in the two periods (R=0.888) as is the case with the placement rates.

It has been observed that the matching efficiency of public job placement services has a tendency to converge over the medium to long term, and that regional matching efficiency is highly rigid and persistent. Therefore, regional gaps in matching efficiency may be reduced but will never entirely disappear.

What are the attributes of regions with high matching efficiency? How did these regions achieve high matching efficiency? These issues are extremely important for policy making.

Table 4 is a comparison by prefecture of the matching efficiency of public job placement services using placement rate and rate of filled vacancy as indicators. It lists the names and values of the top 10 and bottom 10 prefectures in terms of period average for each indicator.

Hokkaido, Iwate, Ishikawa and Niigata rank highest in both rate of filled vacancy and placement rate. Hokkaido ranks highest in placement rate and second in rate of filled vacancy next to Okinawa. These prefectures have a large agricultural population and many depopulated areas. The usage of public job placement services is relatively high in these prefectures as there are few alternative job seeking measures beyond utilizing public agencies. It is believed that the matching efficiency of public job placement agencies is high given that a variety of employers and job seekers take advantage of these agencies. Especially in snowy and cold Hokkaido and Iwate, where there are many seasonal workers and those traveling to other prefectures to work in the wintertime, once a job announcement is made, it is easily filled. This may be one explanation for the high matching efficiency in these prefectures.

Prefectures with the lowest placement rate include four prefectures in the Tokyo metropolitan region (Tokyo, Saitama, Chiba and Kanagawa) and two prefectures in the Kinki region (Osaka and Hyogo). In these metropolitan areas, there are a variety of alternative measures available for job offers and job seekers, and the market share of public job placement agencies is relatively small in terms of job offers and job seekers alike. Furthermore, public job placement agencies in metropolitan areas work with many difficult-to-place individuals such as middle to old aged and unskilled workers. This is another potential reason for them to experience a low matching rate, as indicated by Nakamura (2002).

Table 4. Comparison by prefecture of the placement rate and rate of filled vacancy of public job placement services (1995 and 2005)

	Y: Placement rate (%)					Y: Rate of filled vacancy (%)			
Prefecture	1995	2005	Period average	Average annual growth	Prefecture	1995	2005	Period average	Average annual growth
(In decsending order by period average)									
Hokkaido	51.7	42.3	45.7	-0.9	Okinawa	73.5	41.6	58.0	-3.2
Iwate	46.3	40.0	40.3	-0.6	Hokkaido	51.5	43.3	49.9	-0.8
Ishikawa	42.5	39.5	38.8	-0.3	Aomori	40.8	42.2	44.5	0.1
Shimane	43.0	38.3	38.4	-0.5	Iwate	41.2	40.1	44.1	-0.1
Niigata	43.0	39.5	37.1	-0.4	Nagasaki	31.6	37.4	37.3	0.6
Tottori	38.5	39.4	37.1	0.1	Miyazaki	29.2	39.5	36.8	1.0
Fukui	35.6	41.9	35.9	0.6	Kagoshima	32.7	37.6	36.6	0.5
Kagawa	37.3	37.3	35.4	0.0	Akita	25.9	39.2	33.9	1.3
Yamanashi	40.5	34.3	35.3	-0.6	Niigata	28.6	27.7	32.9	-0.1
Yamagata	30.5	39.6	34.8	0.9	Ishikawa	31.5	25.8	32.4	-0.6
(Omission)									
Osaka	24.8	29.4	24.1	0.5	Gifu	20.1	20.9	21.5	0.1
Hyogo	23.4	29.3	23.7	0.6	Kanagawa	25.8	15.2	21.4	-1.1
Fukuoka	23.3	28.1	23.7	0.5	Yamanashi	21.9	21.9	21.3	0.0
Aichi	23.3	27.7	23.5	0.4	Chiba	20.1	18.4	20.8	-0.2
Kochi	21.8	27.1	22.7	0.5	Saitama	21.5	17.3	20.7	-0.4
Aomori	18.5	27.0	22.3	0.9	Okayama	19.6	19.0	20.7	-0.1
Kanagawa	20.3	24.8	20.8	0.5	Gunma	24.0	16.6	20.7	-0.7
Saitama	19.8	24.4	20.0	0.5	Shizuoka	18.7	19.0	19.1	0.0
Chiba	18.7	24.9	20.0	0.6	Aichi	18.8	10.8	15.3	-0.8
Tokyo	17.2	24.2	19.1	0.7	Tokyo	17.6	10.4	15.2	-0.7

Source: Estimations from *Labor Market Annual Report* (1995 and 2005).
Notes: 1. Average annual growth = (Y in 2005 – Y in 1995)/10 years.
2. All statistical data excludes general workers, total number of men and women, recent graduates and part-time workers.

What are the common attributes of regions with high matching efficiency? The contribution rate (K) or the market share of public job placement services is believed to be an important factor. As Ueno, Kambayashi, and Murata (2004) proclaim, the higher the usage rate of public job placement services, the more job offers and job seekers to use the agencies' services and the easier the matching becomes. It is also highly likely that the structure of the labor force (P), i.e., the respective share of seasonal workers, domestic migrant workers, old-aged and unskilled workers, has an impact on matching efficiency. Indicators to show the stringency (D) of labor demand, such as the

unemployment rate, effective job offer-job seeker ratio, and industrial structure (I) should also be considered.

The individual policies of public job placement agencies are also an important factor. For instance, the preceding study regarded regional specific policies as important explanatory factors in the labor market in the US because a variety of job offers and job seekers exist, and each region has its own employment and matching policies. Compared to the US, policies do not differ widely between regions in Japan. However, according to the Study on the Possibility of Renovating the Legacy System of the Job Security Administration, carried out by the Ministry of Health, Labour and Welfare in 2003, there is a certain level of regional difference at the prefectural level (Labor Bureaus) amid factors such as the existence/nonexistence of an employment promotion system, follow-up system for unfilled vacancies and an information supply system for job seekers. These differences are, therefore, included as explanatory variables in the present study.

Based on prefectural data from 1997-2003, this paper will estimate the function (first equation) of matching efficiency (M) in consideration of the above factors. Table 5 is the estimation result when controlling the regional specific policy factor (S),[11] while Table 6 is the estimation result when excluding the regional specific policy factor.

$$M_i = a_o + a_1 K_i + D\alpha + P\beta + I\varphi + S\lambda + Z\gamma + \varepsilon_i \qquad (1)$$

Table 5 indicates that none of the three dummy variables reflecting individual regional programs has any statistically significant impact on matching efficiency. Nevertheless, it would be inappropriate to assume that regional specific policies have no impact on matching efficiency simply due to a small sample size of 47 regions and the arbitrariness of evaluating the effect of these systems at the prefectural level.

While excluding the variable of regional specific programs form the estimations, Table 6 indicates[12] that the supply-demand stringency factor (the

[11] It is a dummy variable. If a prefecture has the concerned system at 1 or more public job placement agencies, it is 1 and if not, 0. It is considered that introduction of these systems would have positive impact on the matching efficiency.

[12] The following explanation is based on the estimation results of Table 6 (seven year-data of 1997-2003), unless otherwise mentioned. In comparison to Table 5, Table 6 has higher degree of freedom and can lead to more robust results.

Table 5. Determinants of matching efficiency (2003, OLS)

	Y : Placement rate			Y : Rate of filled vacancy		
	Coefficient	Standard error		Coefficient	Standard error	
Contribution rate of public job placement agencies	0.1740	0.0401	***	0.1219	0.0509	**
Supply/demand indicators						
Effective job offer-job seeker ratio	0.0882	0.0518	*	-0.2770	0.0613	***
Unplacement rate	-0.0131	0.0090		0.0019	0.0106	
ln (Effective job seekers)						
ln (Effective job offers)						
Labor structure						
Ratio of women	-0.0260	0.1020		-0.1012	0.1445	***
Ratio of junior and senior high school graduates	0.3115	0.1018	***	0.4108	0.1270	***
Ratio of graduates of specialized training colleges	-0.2559	0.3077		-0.0830	0.3917	
Ratio of graduates of technical and junior colleges	-0.1285	0.2044		-0.1686	0.2978	
Ratio of turnovers	0.1494	0.1378		0.0911	0.2154	
Ratio of newly employed	0.1257	0.1716		0.0336	0.2714	
Ratio of youths: Ages 20-29	0.0749	0.0761		0.1539	0.1207	
Ratio of middle aged persons: Ages 45-54	0.1436	0.2155		0.4374	0.2991	
Ratio of seniors over 55	0.1810	0.2048		0.1548	0.2808	
Industrial structure						
Ratio of placement in the service sector	-0.0899	0.0697		-0.0251	0.0913	
Ratio of placement in the manufacturing sector	-0.3027	0.1066	***	-0.2277	0.1235	*
Ratio of placement in micro enterprises	0.0730	0.0813		0.0663	0.0938	
Ratio of placement in small enterprises	0.0363	0.0928		0.1347	0.0863	
Ratio of placement in medium-sized companies	0.0943	0.0785		0.0966	0.0899	
Regional specific systems (S)						
Employment promotion dummy	0.0178	0.0198		0.0247	0.0239	
Follow-up on unfilled vacancy dummy	0.0005	0.0175		0.0104	0.0225	
Information supply for job seekers dummy	0.0105	0.0123		-0.0145	0.0164	
Constant	0.0246	0.1892		0.1623	0.2930	
R-squared	0.7353			0.8512		

Notes: 1. Sample size: 47 prefectures.
2. Micro enterprises: 5-29 permanent employees, small companies: 30-99 permanent employees, medium-sized companies: 100-299 permanent employees.
3. Contribution rate of public job placement agencies = placement cases through public job placement agencies/(total placement cases – placement cases of recent graduates)
4. ***, ** and * indicate that the coefficient is not zero at a significant level of 1%, 5% and 10%, respectively.

contribution rate of public job placement agencies, effective job offer-job seeker ratio, effective numbers of job offers and job seekers, etc.), the labor structure factor (ratio of junior and senior high school graduates, ratio of middle and old aged persons, etc.) and industrial structure factor (ratio of placement in the manufacturing sector and ratio of micro and small enterprises) all have a statistically significant impact on matching efficiency.

Firstly, the coefficient of the contribution rate of public job placement agencies is positive in all cases and is thus statistically significant. That is to say, the higher the contribution rate of the agency, the higher the matching efficiency, measured by both placement rate and rate of filled vacancy. The gap in matching efficiency between cities (Tokyo metropolitan and Kinki areas) and provinces (Hokkaido and Iwate, etc), as analyzed in the previous section, appears to stem primarily from the contribution rate of agencies. In cities, there are many private job placement services and job advertisements, rendering the market share of public agencies relatively small. In provinces, public agencies have a relatively high market share, as there are few other alternatives for job seekers.

Secondly, the higher the employment rate of recent junior and senior high school graduates, the higher the matching efficiency measured under both indexes—placement rate and rate of filled vacancy increase. On a personal level, one would consider it only natural for a less educated individual to have greater difficulty finding a job, thus leading to a lower matching rate, assuming other conditions remain constant. However, prefectures with many market underdogs actually have a higher matching rate. This may be due to an ease in finding simple work in construction or the security business.[13] Prefectures with a higher ratio of placement in the manufacturing sector have lower placement rate and rate of filled vacancy. This may be because matching is more difficult in the manufacturing sector than in the service sector.

An effective job offer-job seeker ratio and ratio of placement in micro and small enterprises has had a significant impact on both placement rate and rate of filled vacancy. That is to say, prefectures with a higher effective job offer-job seeker ratio have higher placement rate and lower rate of filled vacancy. The prefectural level correlation analysis in the previous section concluded that there was either no correlation or a positive correlation

[13] Special mention to Koichi Koyama for indicating this point.

Table 6. Determinants of rate of filled vacancy and placement rate (1997-2003)

	Y : Placement rate			Y : Rate of filled vacancy		
	Coefficient	Standard error		Coefficient	Standard error	
Route rate of public job placement agencies	0.2180	0.0185	***	0.2398	0.0231	***
Supply/demand indicators						
Effective job offer-job seeker ratio	0.1499	0.0152	***	-0.1866	0.0246	***
Unplacement rate	-0.0117	0.0032	***	0.0064	0.0059	
ln (Effective job seekers)						
ln (Effective job offers)						
Labor structure						
Ratio of women	0.0353	0.0321		0.0518	0.0445	
Ratio of junior and senior high school graduates	0.1262	0.0399	***	0.1811	0.0579	***
Ratio of graduates of specialized training colleges	0.0025	0.0962		0.1692	0.1801	
Ratio of graduates of technical and junior colleges	-0.1199	0.0825		-0.2272	0.1799	
Ratio of turnovers	0.2226	0.0468	***	0.4177	0.0728	***
Ratio of newly employed	0.1792	0.0561	***	0.3452	0.0931	***
Ratio of youths: Ages 20-29	0.0466	0.0336		0.0315	0.0523	
Ratio of middle aged: Ages 45-54	0.0262	0.0787		0.0115	0.1238	
Ratio of seniors over 55	0.0822	0.0882		-0.1031	0.1087	
Regional specific structure						
Ratio of placement in the service sector	-0.0529	0.0245	**	-0.0561	0.0366	
Ratio of placement in the manufacturing sector	-0.2436	0.0343	***	-0.2955	0.0423	***
Ratio of placement in micro enterprises	0.0482	0.0224	**	0.0626	0.0351	*
Ratio of placement in small enterprises	0.0470	0.0229	**	0.0915	0.0364	***
Ratio of placement in medium-sized companies	0.0393	0.0277		0.0364	0.0431	
1998	0.0098	0.0081		-0.0162	0.0138	
1999	0.0247	0.0082	***	-0.0192	0.0138	
2000	0.0224	0.0089	***	-0.0277	0.0153	*
2001	0.0162	0.0092	*	-0.0288	0.0172	*
2002	0.0112	0.0104		-0.0479	0.0184	***
2003	0.0180	0.0106	*	-0.0329	0.0185	*
Constant	-0.0867	0.0496	*	-0.0911	0.0832	
R-squared	0.6408			0.6632		

Notes: 1. Sample size: 329 (47 prefectures over a period of seven years), OLS model.
2. 1997 is the benchmark for year dummies.

between placement rate and rate of filled vacancy. However, it has been discovered that when other factors are the same, a negative correlation also exists due to an effective job offer-job seeker ratio. Prefectures with an industrial structure that have a high concentration of micro and small enterprises also have high placement rate and rate of filled vacancy.

In summation, it has been discovered that region specific programs in general do not impact the matching efficiency of public job placement services. However, it has also been found that the labor supply-demand environmental factor (the contribution rate of public job placement agencies, effective job offer-job seeker ratio, effective number of job offers and job seekers, etc.), the distribution of job finders by educational background and age group as well as the industry classification for jobs obtained by job seekers, all have a significant impact on the matching efficiency of public job placing services.

VII. Conclusion

There has been growing interest in the matching efficiency of public job placement agencies following the deregulation of job placement services in Japan in recent years. This paper analyzed the regional gap and its trend in the matching efficiency of public job placement services based on prefectural data following the second half of the 1990's, when full scale deregulation of job placement services began. The findings of the study are as follows:

(i) Firstly, it has been discovered that in recent years the difference in placement rate and rate of filled vacancy within a single regional block have been diminishing and matching efficiency converging. It is believed that inter-regional labor flow contributes to the convergence of matching efficiency within a single regional block, since regions with higher matching efficiency that enjoy either a high placement rate or low rate of filled vacancy subsequently have a higher net labor inflow rate. Since there are strong rigidity in regional placement rate and rate of filled vacancy, the regional gap in matching efficiency will never entirely disappear.

(ii) Secondly, provinces such as Hokkaido and Iwate were identified as having both a high rate of filled vacancy and high placement rate based on prefectural comparison. Cities such as Tokyo and Osaka have relatively low matching efficiency. Based on aggregate time-series data, rate of filled vacancy and placement rate tend to move inversely proportionate to one another owing to an effective job offer-job seeker ratio. These two indexes, however, have a positive correlation at the prefectural level with many prefectures enjoying both high placement rate and high rate of filled vacancy.

(iii) Lastly, factors for regional disparities in matching efficiency were examined. Independent regional policies do not have a clear impact, but

regions where public job placement agencies have a high market share, that also have a high share of junior and senior high school graduates among the job finders and a low share of placements in the manufacturing sector, tend to have high matching efficiency. Regions with high concentrations of micro and small enterprises were also found to enjoy high placement rate and rate of filled vacancy.

From the results obtained in part (i), one might argue that the removal of labor flow obstacles would enhance inter-regional labor flow, increase the matching efficiency of public job placement agencies and dissolve regional disparities. Such measures would include a subsidy for moving costs, housing assistance in the new location and employment assistance for spouses. Part (ii) above indicates that a clear disparity in matching efficiency exists between cities and provinces. Explanatory factors for such a disparity are rooted in the market share of public job placement agencies, the nature of supply and demand in the labor market, industrial structure and the structure of the labor force, and not in regional specific policies (according to part [iii] results). It would, therefore, be unfair to evaluate the achievement of public job placement agencies based on these indicators without also focusing on the above points.

Appendix: Geographic distribution of public job placement agencies in 2004

Note: Boundary lines indicate areas of jurisdiction under each public job placement agency.

References

All Labour Ministry's Workers Union. 2004. Ima naze koteki shokugyo shokai ka [Public job placement services—why now?]. http://www.zenrodo.com/min/min_shu/20050210.htm.

Barro, Robert J., and Xavier Sala-i-Martin. 1995. *Economic growth.* New York: McGraw-Hill.

Black, Dan A., Jeffrey A. Smith, Mark C. Berger, and Brett J. Noel. 2002. Is the threat of reemployment services more effective than the services themselves? Experimental evidence from the UI system. NBER Working Paper no.8825, National Bureau of Economic Research, Cambridge, MA.

Cahuc, Pierre, and André Zylberberg. 2004. Labor market policies. In *Labor economics,* 635-87. Cambridge, MA: MIT Press.

Dolton, Peter, and Donal O'Neill. 1996. Unemployment duration and the restart effect: Some experimental evidence. *Economic Journal* 106 (435):387-400.

Fougere, Denis, Jacqueline Pradel, and Muriel Roger. 1998. The influence of the state employment service on the search effort and on the probability of leaving unemployment., CREST-INSEE Working Paper no.9904, Institut National de la Statistique et des Etudes Economiques, Paris.

Iwamoto, Toshiya. 2005. Matchingu shihyo de mita haro waku no shokugyo shokai [Evaluation of public job placement services in Japan using matching indicators]. Unpublished manuscript.

Kodama, Toshihiro, Yoshio Higuchi, Masahiro Abe, and Mitsuru Sunada. 2004. Nyushoku keiro ga tenshoku ni motarasu koka [The impact of route selection on successful career changes when reentering the job market]. RIETI Discussion Paper 04-J-035, Research Institute of Economy, Trade and Industry, Tokyo.

Nakamura, Jiro. 2002. Tenshoku shien shisutemu to shiteno koteki shokugyo shokai kino [The function of public job placement services as a system to assist career changes]. *The Japanese Journal of Labour Studies* 44, no.9:26-37.

Ueno, Yuko, Ryo Kambayashi, and Keiko Murata. 2004. Matchingu no gijutsuteki koritsusei to nyushoku keiro sentaku kodo [The technical efficiency of matching and route selection when entering the job market]. ESRI Discussion Paper Series no.106, Economic and Social Research Institute, Cabinet Office, Government of Japan, Tokyo.

Walwei, Ulrich. 1996. Improving job-matching through placement services. In *International handbook of labour market policy and evaluation,* ed. Gūnther Schmid, Jacqueline O'Reilly, and Klaus Schōmann, 402-30. Cheltenham, UK;

Brookfield, US: Edward Elgar.

Yavas, Abdullah. 1994. Middlemen in bilateral search markets. *Journal of Labor Economics* 12 (3): 406-29.

Zhou, Yanfei. 2007. Koteki shokugyo shokai ni okeru macchingu koritsu no shurensei [The regional gap on the efficiency of public job placement agencies]. In Chiiki Koyo Soshutsu no Shinchoryu: Tokei Bunseki to Jittai Chosa kara Mietekuru Chiiki no Jittai [*New trend in employment creation in regions: Realities of regions through statistical analysis and survey*], JILPT Project Research Series, no.1:142-61. Tokyo: The Japan Institute for Labour Policy and Training.

Measures for Supporting Regional Job Creation in Japan

Minoru Ito
The Japan Institute for Labour Policy and Training

As regards measures for supporting regional job creation in Japan, the central-government-led policies that were drawn up during the period of rapid economic growth and that relied on public works spending continued until the 1980s. The recessionary measures in the 1990s, however, resulted in the central and local governments to accumulate huge budget deficits, and it was no longer possible to adopt the policy measure of promoting regional development through public works spending. As a result, in the economic recovery phase that began in 2003, the economic gap between large urban areas where private firms are recovering and rural areas that depend on the decreasing public spending is rapidly expanding. Faced with these widening regional divergences, the government is making a policy change from the central-government-led, institutionalized policy for regional recovery to a decentralization policy where regional communities voluntarily draw up and execute their policies for regional development.

I. Changes in Regional Development Policies

1. Policy up until the 1990s

A period of rapid economic growth began in 1965 after a period of confusion in the wake of the Second World War. During this period of economic growth, clusters of heavy and chemical industries rapidly developed along the Pacific belt connecting the three major metropolises of Tokyo, Nagoya and Osaka. In addition to this industrial development policy, the labor policy also promoted labor movement from rural areas to metropolises. The annual influx of people into the three major metropolises exceeded 1 million in the 1960s. This large labor movement into large urban areas, however, resulted in overpopulation in metropolises and depopulation in rural areas, and correction of regional economic divergences became a political issue.

With the policy concept of “balanced development of the national land,” the new National Comprehensive Development Plan, which was drawn up in 1969, aimed to decentralize firms that were concentrated in large urban areas. In response, the policies for correcting regional divergences were also changed

to one that aimed to move labor demand to rural areas. The successive measures adopted in the 1970s provided for favorable treatment for plants that relocated from large urban areas to rural areas and to designated regions that did not have any significant industrial cluster, and thus building of plants in rural areas was promoted.

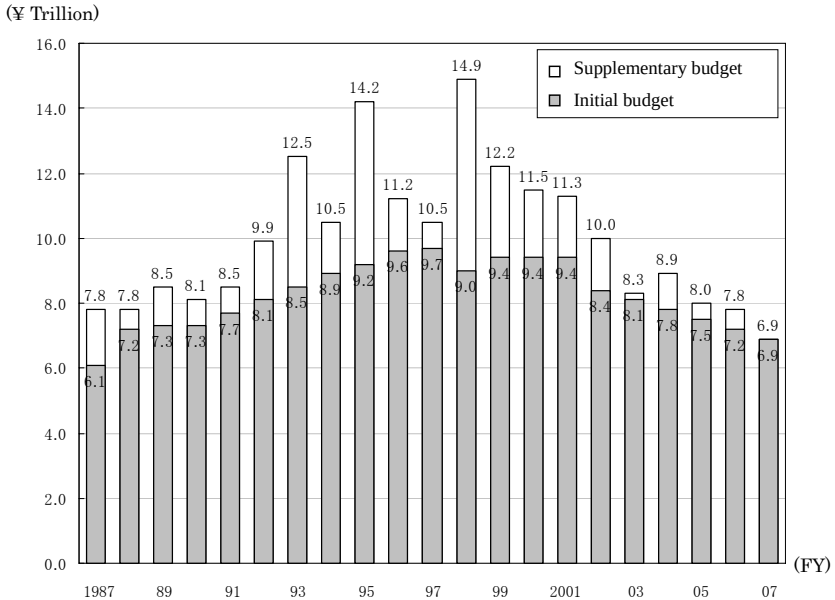
The policy for decentralization of firms was already started by the Law for the Promotion of New Industrial Cities, which was enacted in 1962, and relocation, firstly, of heavy and chemical industries into rural areas was promoted. Moreover, the Technopolis Act, which was enacted in 1983, promoted location of process and assembly industries in rural areas. The enactment of the Act for Multipolar Development of the National Land in 1988, together with the enactment of the Brain Location Act, attempted to promote decentralized location of the software development industry in rural areas.

Aside from the series of policies for increased labor mobility, policies for specific regions were also implemented. With the effect of the first oil crisis (1973), Japan's economic growth substantially slowed down, and consequently a large number of job leavers arose in specific regions. Emergency employment measures were implemented as temporary measures for the job leavers. These emergency employment measures were also adopted at the time of the second oil crisis (1979) and at the time of the recession caused by the appreciation of the yen in the mid-1980s. In the 1980s, however, regional employment measures, which were temporary measures for job leavers in depressed industries and regions, began gradually to take the form of medium- to long-term measures for employment development.

In projects for development of regional employment carried out from 1982 through 1986, model regions, which were mostly depressed regions, were selected, and regional employment promotion conferences composed of representatives of municipalities, public employment services, vocational training schools, and workers' and employers' groups drew up guidelines for employment development. Furthermore, the Regional Employment Development Promotion Act, which was enacted in 1988, was, unlike the temporary laws for regional employment, a permanent law for medium- to long-term employment development. The law consolidated the model regions into three types of regions. A system for subsidizing wages for regional employment development was the centerpiece of the law.

Japan experienced the bubble economy at the end of the 1980s, but after

Figure 1. Changes in public-works-related budget



Source: Ministry of Finance.

the burst of the bubble, it fell into a serious recession. Large-scale public works spending was adopted as a recessionary measure, and the public fixed capital formation totaled close of ¥400 trillion during the 1990s. If we look at the changes in the public-works-related budget, we can actually see that it peaked in fiscal year 1997 in terms of the initial budget (¥9.7 trillion) and in fiscal year 1998 in terms of the overall budget including the supplementary budget (¥14.9 trillion).

The large-scale public investment of the 1990s amounted to more than 40% of the total investment since 1955, but because it was not accompanied by commensurate economic growth and increase in tax revenues, it set the country's finances into a critical situation. After 1999, the public-works-related budget was substantially reduced. In fiscal year 2006, the overall budget declined to ¥7.8 trillion, 52.4% of the peak (Figure 1).

The reduction in public works resulted in the deteriorating employment situation in rural areas and rapidly increased the number of unemployed people. Moreover, as a result of a surge of plant relocation to China and other countries as the yen appreciated, regional communities were faced with the hollowing

out of the manufacturing industry, and the number of employees in the manufacturing industry declined considerably. It declined from 15.69 million at the peak in 1992 to 12.22 million in 2002, a substantial decrease of 3.47 million employees. The number of unemployed people and the unemployment rate in 1990 were 1.34 million people and 2.1%, respectively. In 2002, the number of unemployed people and the unemployment rate deteriorated to 3.59 million and 5.4%, respectively (Ministry of Internal Affairs and Communications, Labour Force Survey).

Because regional development policy up until the 1990s required local governments to prepare plans that fitted the specifications set by the central government in order to obtain subsidies and favorable tax treatment, regional development plans were uniform and regional characteristics were ignored. Therefore, regional development in different parts of the country became extremely similar to one another, and there were hardly any regional characteristics.

Resort development based on the Act for Development of Comprehensive Resort Areas, which was enacted in 1987, is a typical case. Because major development companies in Tokyo and Osaka were responsible for the basic work of drawing up the basic concepts of most large-scale resorts for prefectural governments, the facilities that were constructed or planned in different locations of the country had extremely similar concepts. The third sector (organizations jointly funded by the local government and private firms) manage the constructed resorts, but because the recession substantially pushed down the actual demand in comparison with the original demand forecast, most of these resorts have either failed or have been in financial difficulties in recent years.

Up until the 1970s when regional social infrastructure was still underdeveloped, the uniform regional development policy of public works spending had a relatively large policy effect. However, by the 1990s when the physical social infrastructure was well developed and the industrial structure was rapidly changing, the effect of such a policy substantially declined.

2. Decentralization Policy after 2000

As a way out of the deadlock in the central-government-led regional policy, decentralization of the administrative system and a conversion to regionally initiated industrial and employment policies were promoted after 2000, starting

with the enforcement of the Omnibus Decentralization Act in 2000. This law abolished the system of agency-delegated functions whereby local governments implemented the central government's policies by delegation, clarified the roles of the central government and local governments, and transferred authority over various duties from the central government to prefectural governments and from prefectural governments to municipalities. In parallel with the "tripartite" reform for realignment of financial resources of the central and local governments (transfer of tax revenue sources, reduction of national subsidies, and review of the local allocation tax), a new direction has been set for decentralization of industrial and employment policies as well.

The Koizumi Cabinet, which came into power in 2001, pushed through policies for disposal of bad debts and for structural reform and began on a path of financial reconstruction through reduction in public works spending. Moreover, it made a policy change that gave more emphasis to large cities through the abolishment of the Act on Restriction of Factories, which restricted location of plants in urban areas, and enactment of the Act on Special Measures for Urban Regeneration, which promoted redevelopment of metropolises, in 2002.

The benefits of economic recovery were felt noticeably in urban areas. In rural areas, the effect of economic stagnation from reduced public works spending was greater than the policy effect of decentralization, and regional divergences are widening. Faced with these widening divergences as well as defeat at the House of Councillors election, the government made regional regeneration an important policy issue and made a policy change from the central-government-led uniform regional policy of the past to a policy where local governments, such as prefectural governments and municipalities, familiar with the local situation and needs would voluntarily draw up their own plans and carry out regional regeneration.

The central-government-led regional policies on industry and labor of the past had a similar policy stance in that they aimed to transfer labor demand from urban areas to rural areas and promote industrial development and job creation in less developed regions. At the regional level, however, it was rarely the case for economic development, vocational abilities development, and job placement to be carried out hand in hand, and coordination among different regional policies had been an issue.

For regional communities to obtain subsidies and favorable tax treatment,

they also had to prepare applications that satisfied detailed specifications of the central government. Therefore, the system hardly allowed regional communities to exercise their own initiative. Even though the abovementioned concept of the regional employment promotion conference in projects for regional employment development in the 1980s was the rudiments of decentralization policy, the constraints of administrative procedures prevented such conferences to fulfill their functions for decentralization.

As regards labor policies, the amendment of the Employment Policy Act of 2000 provided for local governments' obligation to make an effort in having their own employment policies. This was the first time in history that employment policies were regarded as local governments' policies. In response to the decentralization of the administrative system, regional employment policies in recent years stress (i) regional initiative and (ii) industrial and employment development by utilizing regional resources (strengths). With the objective of specifically promoting employment development in coordination with local governments, the Regional Employment Development Promotion Act was amended in 2001, and the method for selecting regions covered by the law was changed from selection by the central government to selection by prefectural governments.

On the other hand, the Industrial Cluster Project initiated by the Ministry of Economy, Trade and Industry in 2000 attempted to prepare an environment conducive to innovation centered on formation of regional human networks and through this to realize endogenous regeneration of regional economy. As of today, 19 regions are selected for the project, and measures for (i) formation of industry-government-university human networks, (ii) support for technological development based on regional characteristics, and (iii) preparation of facilities for supporting entrepreneurs are being carried out through the cooperation of the Regional Bureaus of Economy, Trade and Industry, small- and medium-sized enterprises (some 5,800 firms), and university researchers (220 universities).

The moves towards revitalization of regional economy based on the ingenuity of regional communities are further reinforced by the Special Zones for Structural Reform (2002-) and the Program for Promotion of Regional Regeneration (2003-). The Special Zones for Structural Reform attempt to promote regeneration of regional economy not by financial measure as is usually the case but by introducing regulatory exceptions in specific regions

based on proposals drawn up voluntarily by local governments.

In response to the changes made in the entity carrying out regional policies, decentralization of employment policies has also been advanced. The amendment of the Employment Security Act of June 2003 allowed local governments to engage in free job placement services, which had been provided only by public employment security offices up until then. Specifically, local governments may, by notifying the Minister of Health, Labour and Welfare, provide free job placement services in relation with their duties pertaining to (i) policies for supporting users of welfare services, (ii) policies for promoting location of firms, (iii) policies for improving the welfare of their citizens, and (iv) policies for development of industry and economy.

3. Expansion of Measures for Assisting in the Programs Proposed by Regional Communities

With the rapid shift in regional development policies in recent years from central-government-led policies to decentralization policies, local governments no longer prepare plans that meet the specifications set by the central government, but they prepare their plans and the central government assesses the feasibility of the plans and assists in their realization.

As regards regional job creation, the Ministry of Health, Labour and Welfare is carrying out the Project for Promoting Regional Job Creation. In this project, a council for regional job creation of a municipality that is working voluntarily on job creation submits proposals for programs for creation of job opportunities, vocational abilities development for jobseekers in its region, provision of information and counseling for jobseekers, and so on. The ministry will then select, in a contest and from all the programs that have been submitted by the councils, programs that are likely to have an effect on job creation, and commissions the execution of the programs to the councils. Subsidies will be paid to the selected programs for up to three years. The number of municipalities that were allowed to participate in the contest was 66, 101 and 67 in fiscal year 2005, 2006, and 2007, respectively.

The Ministry of Internal Affairs and Communications has also started to implement a similar measure. The ministry has launched the Program for Supporting Regional Communities That Are Making Efforts, in which local allocation tax is granted to local governments that have plans for implementing their own projects. These projects include those for regional administrative

reform, discovery and branding of local produce, measures to counter declining birthrate, relocation of companies into the region, settlement of people in the region, promotion of tourism and exchange, downtown redevelopment, support for the independence of young people, promotion of safety and security in urban areas, and environmental preservation. In the first and second rounds of application submission in fiscal year 2007, 1,181 and 1,802 local governments submitted applications, respectively. The percentage of local governments submitting applications among all local governments was 63.0% and 96.2% for the first and second rounds, respectively.

The Ministry of Economy, Trade and Industry is implementing measures for regional regeneration through the Program for Supporting Small- and Medium-sized Enterprises to Utilize Regional Resources and the Enterprise Location Promotion Act. As for the support provided through the Enterprise Location Promotion Act, the aim is to provide support, based on the law, to local governments that are voluntarily and systematically working on the formation and regeneration of industrial clusters by inviting firms to relocate in their region and thereby strengthen the foundation for independent development of the regional economy. As of today, 28 programs of 20 prefectures are approved. Besides the Ministry of Health, Labour and Welfare, the Ministry of Internal Affairs and Communications, and the Ministry of Economy, Trade and Industry, similar measures for assisting in regional development are being carried out by the Ministry of Land, Infrastructure and Transport as well as the Ministry of Agriculture, Forestry and Fisheries.

II. Present State of Regional Job Creation

1. Actual State of Regional Divergences in Employment

Economic recovery at a time when public works investment is being reduced is widening the gap between large urban areas and rural areas. Moreover, in rural areas too, there are regions where the employment situation is relatively favorable and regions where the employment situation is bad. While divergences between large urban areas and rural areas are caused by differences in the concentration of firms and population, the regional divergences within rural areas are mainly brought about by the regional maldistribution of industries. Table 1 examines how regional industrial structures differ in different regions. A comparison of the composition of

Table 1. Composition of employees by industry in unfavorable and favorable regions (%)

	Nationwide		Unfavorable regions (total)		Favorable regions (total)	
	2004	2006	2004	2006	2004	2006
Agriculture, forestry and fisheries	0.4	0.4	1.2	1.2	0.5	0.5
Mining	0.1	0.1	0.2	0.1	0.1	0.1
Construction	8.4	7.0	11.3	9.1	8.8	7.4
Manufacturing	19.1	16.9	11.9	10.1	26.1	23.2
Electricity, gas, heat supply and water	0.4	0.5	0.4	0.5	0.4	0.5
Information and communications	2.7	2.8	1.5	1.6	1.2	1.3
Transport	5.4	5.0	5.6	4.9	5.1	4.8
Wholesale and retail trade	23.5	21.2	25.1	21.9	22.1	20.0
Finance and Insurance	2.7	2.5	2.8	2.3	2.4	2.1
Real estate	1.9	1.8	1.6	1.4	1.2	1.2
Eating and drinking places and accommodations	9.3	8.3	9.9	8.7	8.4	7.6
Medical, health care and welfare	8.0	9.5	10.5	12.2	7.6	9.1
Education, learning support	2.6	5.0	2.1	5.1	2.0	4.6
Compound services	0.7	1.2	1.3	1.8	0.9	1.3
Services (not elsewhere classified)	14.9	14.8	14.7	14.0	13.1	13.5

Source: Ministry of Internal Affairs and Communications, *2007 Establishment and Enterprise Census*.

employees by industry in regions with unfavorable employment situation and regions with favorable employment situation (in 2004 and 2006) shows that there are significant differences in the composition of employees.

In Table 1, seven regions with particularly severe employment situation were chosen as regions with unfavorable employment situation (i.e., Hokkaido, Aomori, Akita, Kochi, Nagasaki, Kagoshima, and Okinawa), and ten regions, excluding Tokyo, Nagoya, and other metropolises, were chosen as regions with favorable employment situation (i.e., Gunma, Tochigi, Shizuoka, Gifu, Mie, Toyama, Fukui, Okayama, Hiroshima, and Kagawa).

Firstly, if we compare the composition of employees in unfavorable and favorable regions in 2006, we find that the industries in which the composition of employees is high in the unfavorable regions are agriculture, forestry and fisheries (+0.5 point), construction (+1.7 points), wholesale and retail trade (+1.9 points), eating and drinking places and accommodations (+1.1 points),

and medical, health care and welfare (+3.1 points). On the other hand, the industry in which the composition of employees is high in the favorable regions is the manufacturing industry (+13.1 points).

Secondly, if we compare the figures of 2006 with those of 2004, we see that in both types of regions, the percentages decreased in construction, manufacturing, wholesale and retail trade, and eating and drinking places and accommodations; while they rose in the tertiary industry of medical, health care and welfare and education and learning support. The trend, it appears, is that the industry's role in promoting increase in employment is shifting from the manufacturing industry to the tertiary industry. It is probable that even in rural areas with small concentration of population, an increase in employment in the manufacturing industry had an effect in inducing an increase in employment in the tertiary industry.

As seen above, it is not too much to say that, as seen from the number of employees, the difference in the industrial structures of unfavorable and favorable regions is the difference mainly in the weight of the manufacturing industry. In regions where the employment situation is severe, there is not much concentration of the manufacturing industry, while the share of the tertiary industry, such as wholesale and retail, restaurants and accommodations, and services, and that of government-dependent industries, such as construction, which is related to public works spending, and medical, health care and welfare, which is related to the public health and nursing care insurance, are large. In terms of industrial structures, the difference between whether the share of the manufacturing industry or that of the tertiary and government-dependent industries is large has a significant influence on the regional divergences in the employment situation.

2. Return of the Manufacturing Industry Back into Japan and Job Creation

We have elucidated above that the difference in the industrial structures of unfavorable and favorable regions is mainly the difference in the weight of the manufacturing industry. It is becoming clear in recent years that Japan's manufacturing industry is moving back into Japan. As a result of rapidly transferring production bases from Japan to China and other countries during the 1990s, domestic employment quickly decreased in Japan, and there were concerns about the so-called hollowing out. In fact, the number of employees in the manufacturing industry began on a downward trend after it peaked at

15.69 million in 1992. By 2005, it decreased to 11.42 million. There was a decline of as many as 4.27 million employees during this period. It is not too much to say that the majority of unemployed people, the number of whom began to rapidly increase from the latter half of the 1990s, came from the manufacturing industry.

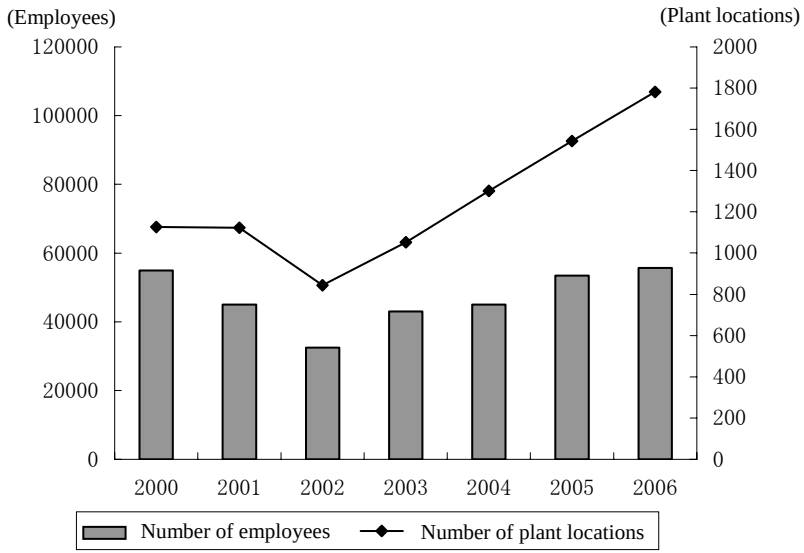
However, from the need to quickly and flexibly respond to rapid technological innovations and variability of output, there is a growing trend to domestically manufacture state-of-the-art products and products that require frequent model changeovers. Even for products assembled in overseas production bases, much of the essential parts fitted into those products are manufactured in and sent from Japan. Therefore, as the cycle of technological innovations and model changeovers becomes shorter, the likelihood for the parts and products that are susceptible to such changes to be manufactured within Japan rises.

As it is already apparent, the number of employees is now trending upwards after it hit bottom in 2002, and it was the manufacturing industry that supported this trend. Employment in the manufacturing industry had been on a continual decline since 1993, but it began to increase in the October-December quarter in 2005 as a result of the economic recovery and the return of production bases to Japan and has since maintained the upward trend. By industry, the addition of the manufacturing industry to the medical, health care and welfare and service industries, which had propped up the increase in employment, had a substantial effect on the recent increase in employment.

It is generally said that industrial development brings with it the service economy, and with this the employment structure is realigned to incorporate the tertiary industry. The recent increase in employment, however, appears to be brought about by both the manufacturing and service industries. Therefore, the effect on job creation of the return back into Japan of the manufacturing industry, which with the overseas transfer of its production bases had caused concerns about hollowing out, is quite significant.

The return of the manufacturing industry can be confirmed by the recent changes in the number of plant locations. Figure 2 shows the number of plant locations in Japan and its effect on job creation. Both the number of plant locations and jobs had been on a decline since 1992, but are now trending upwards after they hit bottom in 2002. The upward trend of the number of plant locations is particularly noticeable and suggests that the number of plants

Figure 2. Changes in the number of plant locations and number of employees expected to be employed



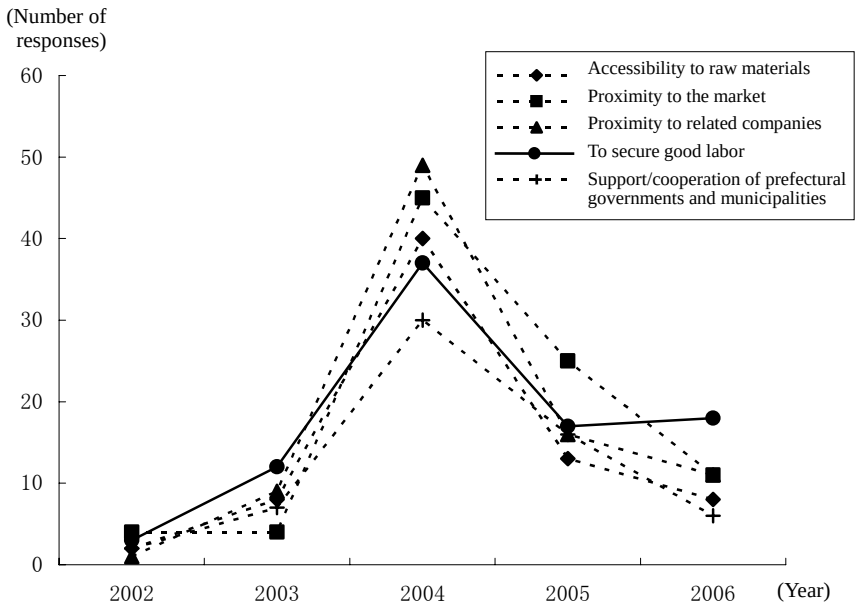
Source: Ministry of Economy, Trade and Industry, *Annual Survey on the Trends of Plant Location*.

locations by small- and medium-sized enterprises is increasing following on the plant locations by large firms.

If we examine the reasons for the locations of firms, the number of which is trending upwards, there are some interesting trends. Figure 3 shows the changes in the reasons for selecting domestic locations. Since the number of firms responding to the survey differs greatly for each year, comparison of the number of responses is meaningless. If we look at the order of responses given in each year, we find that whereas responses such as "proximity to related companies" and "proximity to the market" are placed at the top before 2006, the response of "to secure good labor" is placed at the top in 2006.

In the past, companies relocated in order to place themselves within a business network in the proximity of their related firms and market, but more recently an increasing number of firms are moving into new locations in search of labor. This suggests that the possibility is increasing for companies to move into rural areas that have not felt the benefits of economic recovery and where the employment situation is difficult.

Figure 3. Reasons for selecting domestic locations (multiple answers)



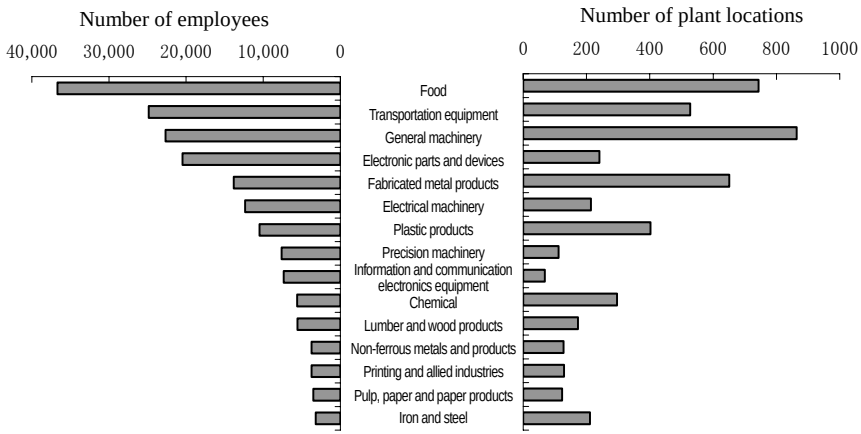
Source: Ministry of Economy, Trade and Industry, *Annual Survey on the Trends of Plant Location*.

3. Characteristics Related to Job Creation within the Manufacturing Industry

The effect of the manufacturing industry to create jobs has played an important role in the recent turnaround in the employment situation. If we look at each subcategory of manufacturing, however, there are significant differences in the job creation effect of different industries.

Firstly, if we look at the expected number of employees to be employed by industry, the food industry had the greatest employment effect, followed by transportation equipment, general machinery, electronic parts and devices, fabricated metal products, and electrical machinery. On the other hand, as for the number of plant locations, the order of industries was slightly different from that of employment with general machinery industry having the largest number of plant locations, followed by food, fabricated metal products, and plastic products (Figure 4).

Figure 4. Number of plant locations and number of employees expected to be employed by industry (2003-2006)



Source: Ministry of Economy, Trade and Industry, *Annual Survey on the Trends of Plant Location*.

As seen above, as regards the situation of plant locations and job creation, food, transportation equipment, general machinery, and fabricated metal products represent industries with large number of plant locations and employment, and regional communities can consider these industries as top candidates for relocation in their regions. The fact that both the number of plant locations and employment is large suggests that many small- and medium-sized enterprises are operating in these industries. The presence of diverse industries and firms also mean that these industries have relatively strong resistance to economic downturns. Even if a regional community succeeds in having plant locations in their region, if they have attracted firms in unstable industries that might close down or withdraw in a short time, the damage that the community would sustain at a time of recession would be greater.

Industries that represent this instability are electronic parts and devices and electrical machinery. These electronics industries have powerful competitors in South Korea, Taiwan and China, and there is a strong likelihood that they would be entangled in cutthroat price competition in a wide range of products. Therefore, with the exception of firms that have an advantage as regards technology development or market share, an increase in production would not equate with an increase in profits, and there is a high probability for firms that

have lagged behind in cutting costs to record considerable losses even though production is increasing and be forced to close down or withdraw their plants. The plants of large firms are no exception. It is essential for a regional community planning to persuade firms to locate in their region to do so strategically by considering regional characteristics and industrial characteristics.

To strategically induce firms to locate in their region, the local government must have the ability to plan and make proposals. Because local governments have become used to the central-government-led regional policy, however, there are not many people within the local government who can plan their own programs by taking into consideration the particular situation of their region. As the arrangement regarding regional policies is rapidly changing in recent years from having regional communities prepare plans that fit the specifications of the central government to having the central government evaluate regional communities' own plans and proposals that take into consideration the actual situation in their regions, the training of a large number of people within the regional communities who can plan and implement their own regional policies has become an important policy issue as well.

While inducement of locations of companies in the region has the greatest effect on regional job creation, not all regional communities can do so because of their geographical conditions or lack of infrastructure. Such communities are locally undertaking job creation on a smaller scale through small businesses and community business as well as business development by NPOs and agriculture. We are beginning to see many successful cases of this type of job creation, which has been propped up by the recent measures for supporting regional communities.

Job Creation by Local Initiatives: Effects of Special Zones for Structural Reform[1]

Kazufumi Yugami
Kobe University

I. What Is a Special Zone for Structural Reform?

The purpose of this paper is to examine the effects of deregulation policies initiated by local government on the creation of local employment. When local governments, such as prefectural and municipal governments tried to implement an industrial or employment policy in Japan, nationwide systems and regulations were treated as given conditions in the past. In the case where any discriminating system (for example, tax system) was applied, it was usually introduced as part of the regional development policy initiated by the central government. In this sense, the "special zones for structural reform," which has continued up to now since the first special zone was approved in 2003, is an entirely new attempt that seeks to revitalize local economies by introducing the "special zones where exceptions to unified regulations are applied in response to regional characteristics and on the basis of the ideas created voluntarily by local authorities or private business firms."[2,3]

In the process of approving special zones for structural reform, desires for deregulation related to a proposal of the special zone are brought to the Office

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[1] This paper is based on Yugami (2007). I am most grateful for valuable comments from Mr. Sumio Egami and Mr. Hirokazu Fujii (both, of The Japan Institute for Labour Policy and Training). All remaining errors in this paper are mine.

[2] The Office for the Promotion of Special Zones for Structural Reform, "Basic Policies for Promoting Special Zones for Structural Reform" (September 20, 2002).

[3] Yokoyama (2002) pointed out as the background of introducing Special Zones for Structural Reform that the regulatory reform initiated as a policy for revitalizing the Japanese economy was in harmony with the local economy revitalization strategy aiming to be free from uniform local policy and to develop characteristic local economy. Ono (2003) raised the following points as the uniqueness of these special zones that were not seen in the past: (i) They try to test regulatory reform, (ii) special zones are realized quickly, (iii) addition of regulatory exceptions is assumed, (iv) extensive information disclosure to the public, (v) tie-up between local governments and central government, (vi) no ministry or agency notices concerning special zones, and (vii) citizens (local authorities) and business firms, which are to be governed by laws and regulations, are treated as the parties that propose regulatory reform. (However, the parties who apply for the proposal are limited to local authorities.)

for the Promotion of Special Zones for Structural Reform in the Cabinet Secretariat first from public entities, including local authorities, private firms and universities, and then "regulations that allow for regulatory exceptions" are to be decided after prior adjustments are made by the related ministries. After this, from the list of regulations, local authorities choose a regulatory exception necessary for realizing the special zones and draw up a plan to apply. In the first proposal invitation in 2002, there were 426 proposals for the special zones and about 900 request items for deregulation, and of these figures, 93 regulatory exceptions were approved. In the first approval of the special zones between April and May 2003, 117 special zones were created including international logistics special zones (reduction of special service fees at harbors), industry-university tie-up special zones (prioritized treatment of foreign researchers' entry and resident application), agricultural revitalization special zones (approval for corporations' agricultural management). By the 14th approval of the special zones in July 2007, the total cases of the new approved plan came to 963.

The latest special zones for structural reform aim to achieve (1) "deregulatory reforms" by which an example of the structural reform in a specific area leads to the structural reform across Japan for the economic revitalization of Japan as a whole and (2) "regional policy" that aims to revitalize the local economy by concentrating industries or creating new industries that meet the characteristics of the area. For these purposes, there can be two standards of evaluation of for the special zones (Ono 2003).

The first is the evaluation to be conducted by the central government aiming to nationalize the deregulation. Specifically, based on the survey results by the authorities that have jurisdiction over regulation, together with an independent survey, including the site inspection of the special zones and hearing of opinions from the authorities, the evaluation committee placed at the special zone promotion headquarters will judge the targeted regulatory exceptions by classifying them into "nationwide implementation," "continuous implementation in the special zones" and "abolition and correction of regulatory exceptions." Actually, under the basic concept that "the regulatory exceptions shall be rapidly promoted nationwide unless there are any special problems," no regulatory exceptions were abolished and corrected in the evaluation conducted 6 times in the past, and 71 out of 72 regulatory exceptions, including regulations for corporations' participation in the management of

agriculture, were applied nationwide, and accordingly the approval of 563 special zone plans was cancelled.[4] It is pointed out, however, that for the promotion of the regulatory exceptions throughout Japan, it is necessary to conduct a program evaluation based on data collected systematically from the inside and outside of the special zones and a quantitative evaluation including comparison of benefit and loss expected from the nationwide deregulation (Suzuki 2004).

The second is the evaluation of the special zone measures for promoting the local economy based on the characteristics of the special zones. In this case, the effects produced in a certain special zone are not always guaranteed in other areas and are not considered a base of the judgment of the nationwide implementation of deregulation. However, the evaluation of the performance based on the objectives for each special zone as well as the consideration of issues involved in the management of the special zone will be useful for analysis of creating the future special zone that will be managed independently by the local area based on deregulation.

Accordingly, this paper discusses the effects of the special zones on the local economies, using the results of the independent questionnaire survey of municipalities that obtained the approval of the special zone for structural reform. There have been many plans that are not intended to have direct effects on the industry and employment of the local area as in the case of special zones related to education and welfare. Instead, this paper examines the factors of success or failure up to the present by limiting the subject to the special zone plan related to the agriculture, tourism and the industry and employment involving industrial revitalization. The paper also examines the effect of the special zone measures focusing on the growth of the local employment in the 2000s by comparison with non- special zone areas.

This paper comprises of the following: Section II discusses a distinctive feature in the process of implementation in special zones by showing the outline of the independent questionnaire survey. Section III considers various factors involving success and failure of the special zones. Section IV quantitatively analyzes the effect of the special zone measures using the number of employees

[4] Therefore, as of July 2007, there are 400 special zone plans to which area-limited regulatory exceptions apply, and as of August 2007, there are 70 items of regulatory exceptions which can be used to apply for special zones.

by area shown in the Establishment and Enterprise Census of the Ministry of Internal Affairs and Communications. The last section V summarizes the conclusions of this paper and presents a policy issue on the key point of the use of the special zone measures for the creation of the local employment.

II. Characteristics of Special Zone Plans

Below, I will utilize the data from "Survey on Effect of Special Zones for Structural Reform on Employment" conduced by the Japan Institute for Labour Policy and Training in August and September 2006.

Considering the time lag until the commencement of effect of special zones and on the basis of the plan classification by the Office for the Promotion of Special Zones for Structural Reform of the Cabinet Secretariat, 250 special zones were selected from 609 special zones where more than one year had passed as of July 2006 after the approval of the plans. The selected special zones are related to industrial and employment policies such as "agriculture," "farming village and city exchanges," "industry-university cooperation," "industrial revitalization," and "ICT-related." Then, questionnaires were sent to the special zone divisions of 368 local authorities which had implemented these plans.[5] The number of questionnaires collected is 192 in terms of plans and 259 in terms of the local authorities which implemented special zones, representing the collection rate of 76.8% and 70.4%, respectively.

Table 1 reclassifies planned fields into four groups in accordance with the characteristics of regulatory exceptions used in special zones. The first group deals with revitalizing industry through industry-university joint research and development and enhanced human resources management and is special zones focusing on personnel-related industrial policies such as the use of researchers and the development of skilled personnel. The second is special zones using deregulation for industry attraction, focusing on deregulation for plant attraction. It includes a small number of special zones which plan to attract large retailers into the central commercial areas. The third is special zones related to tourism, focusing mainly on deregulation related to regulatory exceptions of the Liquor Tax Act for production of *doburoku* (unrefined *sake*) and for operation of farm

[5] The plans include those for which approval was cancelled as a result of the nationwide implementation of regulatory exceptions.

Table 1. Planned fields of respondents and main contents of regulatory exceptions

Planned fields	Main contents of regulatory exceptions	Number of plans	Number of implementing entities
Industry-university cooperation and human resources	Deregulation for side work of national university teachers, promotion of acceptance of foreign researchers, exemption of ICT course tests, joint public-private job placement, etc.	46	67
Industry attraction	Approval for renting land developed by land development corporations, exclusion from industry-transfer promotion areas, and attraction of large retailers into central commercial areas	34	42
Tourism and farming village-city exchanges	Mitigation of requirements for farm tourist homes, approval to produce unfiltered alcoholic beverages in farm tourist homes, use of national and quasi-national parks for tourism, etc.	45	65
Agriculture revitalization	Entry of corporations into agriculture business management, mitigation of requirements for lower limit on land area after acquisition of agricultural land, free job placement services for agricultural universities, etc.	67	85
	Total	192	259

tourist home. The last is special zones that plan to reuse idle or brown farmland or to increase agricultural workers, using mainly deregulation concerning entry into agriculture business by joint-stock companies and NPOs.

Table 2 shows the profiles of plans and responses to subjective outcome at this moment. Considering the limited space of this paper, I will list up the characteristics of each planned field as follows:

(i) Regarding the entities that implement special zones, the special zones related to tourism and agriculture are, in many cases, implemented by towns or villages with population of less than 50,000, while those related to industry-university cooperation, industry attraction, etc. that aim to promote industry are often implemented by local authorities with a large population. Especially in the field of industry-university cooperation, many

Table 2. Characteristics of special zone plans by planned field

			Planned fields			
		All samples	Industry-university cooperation and human resources	Industry attraction	Tourism and farming village-city exchanges	Agriculture revitalization
Responding local authorities	prefecture	30.1%	46.3	38.1	16.9	23.5
	city	50.2%	50.8	57.1	38.5	55.3
	town or village	19.7%	3.0	4.8	44.6	21.2
Implementation patterns	By prefecture alone or jointly	11.6%	19.4	16.7	4.6	8.2
	By municipality alone or jointly	43.6%	19.4	52.4	49.2	54.1
	Jointly by prefecture and municipality	44.8%	61.2	31.0	46.2	37.7
Implementation periods	Average number of months passing after approval	29.3	34.9	30.6	27.6	25.5
	Average number of months of applying regulatory exceptions	24.6	32.9	24.6	25.7	17.0
	Nationwide implementation (cancellation of approval)	52.5%	17.9	61.9	30.8	91.8
No action for implementing special zones		11.2%	10.5	7.1	23.4	4.7
Independent job creation programs related to special zones	Available before approval	16.5%	33.3	17.5	1.6	14.3
	Available after approval	16.9%	21.2	20.0	12.5	15.5
	No related programs	66.5%	45.5	62.5	85.9	70.2
Job creation effect of special zones	Effective in job creation	25.3%	20.6	47.5	15.6	25.6
	No effect	34.5%	31.7	27.5	40.6	35.4
	Job creation effect is not anticipated or is not grasped	40.1%	47.6	25.0	43.8	39.0
Sample size		259	67	42	65	85

prefectures are involved in the implementation of special zones.[6]

(ii) The period of implementation of special zones until the date of this survey is long in the case of special zones related to industry-university cooperation and industry attraction, but is quite short in the case of many special zones related to tourism and agriculture. As regulatory exceptions related to industry attraction and entry in agriculture were applied nationwide, more than 50% of the survey samples are those of the local authorities that already had approval of their plans cancelled.

(iii) Nearly 90% of the local authorities have taken actions since obtaining the approval of their plans. However, many of them only conduct public relations activity or set up a section in charge of their plans, and only a few have proceeded with their plans involving various local entities such as business firms, universities and citizens.

(iv) Industrial programs and skill development for creating employment opportunities and supports for jobseekers are collectively called "job creation programs." As a result of analyzing the implementation of local authorities' own programs related to special zone plans, a majority of respondents reply that there are no job creation programs related to special zones. However, the survey results suggest the existence of forward-thinking municipalities. Namely, approximately 17% of the local authorities started to implement related programs before the approval of special zones and they have used deregulation policies for the special zones as a means to proceed with their independent industrial and employment programs.

(v) According to the respondents' subjective outcomes concerning the effect of special zones on job creation up to the date of this survey,[7] many local authorities do not expect or have grasped direct effect on job creation, and approximately only 25% of respondents reply that they have had job

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[6] According to other responses obtained in this survey, approximately 70% of the local authorities that "anticipate the effect of special zones on employment" have identified their target industries: the target industries of the special zones related to industry-university cooperation and industry attraction and that of the special zones related to tourism and agriculture revitalization are the manufacturing industry and agriculture, respectively.

[7] Regarding replies to job creation and increase in employment in their local area, replies saying "there is a great effect" or "there is a certain effect" are grouped into replies saying "there is an effect," while replies saying "there is no much effect" or "there is almost no effect" are grouped into replies saying "there is no effect."

creation effect.

III. Factors Determining Success of Special Zones

Government policies are usually evaluated on the basis of the objective outcomes affected by the policies. For example, in order to evaluate vocational training programs for the unemployed and new learning programs for education at schools, the employment rates and wages of the unemployed after the completion of the programs and the performance of students are adopted as outcomes, respectively, and the effects of these programs are measured quantitatively.

However, the existing survey results concerning the outcomes of special zones for structural reform show that the outcomes vary largely from one special zone to another.[8] For example, as the effect of special zones related to industry-university cooperation, some say the special zone resulted in constructing a system of collaboration with local firms, while others report quantitative results, including the number of business firms entering into the zones. In addition, the quantitative results, including the numbers of business firms producing and the quantities of production, are commonly reported as in the case of the special zones using the deregulation policy related to *doburoku* (unfiltered *sake*), and whether to report the number of tourists, which is an indirect effect, depends on the policies of local authorities.

In this questionnaire survey, the type of entities responding to the survey and the target industries vary depending on each plan. Consequently, using the subjective answers given concerning the existence or non-existence of the effect on job creation in the special zones listed in Table 2, I will identify the factors that determine the degree of planner satisfaction with job creation.

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[8] Office for the Promotion of Special Zones for Structural Reform, Cabinet Secretariat, "Special Zones are Gold Mines—Examples of Special Zone Outcomes" (May 2006), http://www.kantei.go.jp/jp/singi/kouzou2/kouhyou/051026/takara.pdf.
In September 2006, a survey was conducted on the economic effects of the special zones approved up until November 2005. Although quantitative results are publicized concerning the number of people employed, the amount of production, etc. in each planned field, the outcomes of each individual plan are not publicized (Office for the Promotion of Special Zones for Structural Reform, Cabinet Secretariat, "Economic Effects of Special Zones," http://www.kantei.go.jp/jp/singi/kouzou2/kouhyou/060925/siryou.pdf).

However, many local authorities do not assume any employment increase as in the case of special zones related tourism. In the case that no effects are grasped, the effects of special zones on job creation will be unclear. Therefore, I first estimate a selection model in which "assuming and grasping effects" is 1 and "not assuming or grasping effects" is 0. Based on this, I estimate the probit model that uses, as an explained variable, binary outcome variable of 1 for "having effect" on creation or increase of employment and 0 for "having no effect" on creation or increase of employment.

Explanatory variables are roughly classified into three as shown in Table 2. The first are the variables related to details of special zone plans, using the dummy variables that show four planned fields and plan implementation patterns (namely, implementation only by prefecture, only by ward, city, town or village or jointly by these). The second are the variables related to the continuity of the plans which include the periods of continuity of the plans and the dummy variable on nationalization of regulatory exceptions. The third are the dummy variables that show the availability of operational measures taken for complementing special zones (not available is 1 and some form of measures have been taken is 0, in accordance with the form used in the questionnaire) and that show the availability of job creation programs for special zones (namely, related programs not available, related programs available after special zones, and related programs available before special zones). I also have used three kinds of plan implementation dummies (prefecture, city, town or village) as explanatory variables used only in the selection model of the first step.[9]

Table 3 indicates estimation results. In Columns (1) and (2), the results are obtained by using, as the variables showing the period of duration of plans, the number of months passing from the date of plan approval to the survey date and the number of months of duration of regulatory exceptions applicable only to certain areas (or duration up to approval cancellation in the case of nationalization of the exceptions), respectively.

First, let us see the estimation results from the selection model indicated in the lower part.

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[9] There are 246 observations in the estimation because I have excluded from the analysis 10 cases for which no answers are given regarding effect on employment and 3 cases in which the values of explanatory variables are missing.

Here, since the "case that effect on employment is anticipated and grasped" is 1, the groups that more strongly anticipate effect on employment have positive and significant coefficients. From the estimation results, we can confirm that there are no differences derived from planned fields or the attributes of local authorities responding to the survey and that there is a significant difference only as regards the implementation patterns of special zones. In other words, job creation effect is more strongly anticipated in special zones implemented alone by a prefecture or a municipality than in special zones jointly implemented by prefecture and municipality. Most of the special zones implemented by a prefecture or municipality are implemented independently by one local authority. Therefore, these local authorities may probably be more interested in creating employment.[10]

With regard to the effect of special zones on job creation (as indicated in the upper part), since "having effect on the creation and increase of employment" is 1, more positive and significant coefficients indicate the factors that improve the job creation effect. First, there are differences with respect to the planned fields, showing that the ratio of respondents saying their special zones have effect on job creation is higher in the special zones related to industry attraction than in the special zones related to farming village and city exchanges and tourism. This means that they have succeeded in obtaining results in compliance with the main purpose of plans for the attraction of business firms. The plan implementation patterns bring about the anticipation of job creation effect as well as significant differences in terms of outcomes. Namely, the special zones that are implemented alone by a prefecture or municipality (independently in many cases) tend to enjoy greater job creation effect than the special zones implemented jointly by prefecture and municipality.

The estimated coefficients for the period of duration of plans are positive and significant, meaning that it takes time until job creation effect begins to appear. The effect of the period is greater in the period from approval date to the survey date than in the period of duration of regulatory exceptions until their adoption throughout Japan (as shown in Column [2]), and the effect

[10] I conducted other estimations using labor supply-demand indexes and population-size dummies before starting special zones. However, these explanatory variables were not statistically significant.

Table 3. Factors determining effect on employment

Effect on employment (effective on employment=1, No effect on employment=0)	(1) Coefficient		(2) Coefficient	
Planned fields (reference: exchange and tourism dummy)				
Industry-university cooperation and human resources dummy	-0.283		-0.246	
	(0.293)		(0.310)	
Industry attraction dummy	0.619		0.657	
	(0.293)	*	(0.294)	*
Agriculture revitalization dummy	0.226		0.252	
	(0.269)		(0.282)	
Patterns (reference: joint prefecture-municipality dummy)				
Prefecture alone dummy	0.632		0.657	
	(0.279)	*	(0.290)	*
Municipality alone dummy	0.553		0.514	
	(0.213)	**	(0.234)	*
Number of months after approval	0.032			
	(0.012)	**		
Number of months of regulatory exceptions			0.026	
			(0.012)	*
Nationwide implementation dummy	-0.013		0.226	
	(0.195)		(0.225)	
Action (non-action) dummy	-0.329		-0.324	
	(0.426)		(0.428)	
Related programs (reference: no program dummy)				
Available after approval dummy	0.306		0.329	
	(0.200)		(0.203)	
Available before approval dummy	0.664		0.681	
	(0.173)	**	(0.249)	**
Constant	-2.318		-2.121	
	(0.468)	**	(0.473)	**
Selection (grasping employment effect=1, others=0)	Coefficient		Coefficient	
Planned fields (reference: exchanges and tourism dummy)				
Industry-university cooperation and human resources dummy	-0.075		-0.063	
	(0.253)		(0.255)	
Industry attraction dummy	0.406		0.382	
	(0.285)		(0.290)	
Agriculture revitalization dummy	0.028		0.018	
	(0.211)		(0.232)	
Patterns (reference: joint prefecture-municipality dummy)				
Prefecture alone dummy	0.621		0.612	
	(0.272)	*	(0.313)	†
Municipality alone dummy	0.480		0.475	
	(0.204)	*	(0.206)	*
Responding local authorities (reference: town or village dummy)				
Prefecture dummy	0.349		0.365	
	(0.220)		(0.223)	
City dummy	0.073		0.073	
	(0.248)		(0.281)	
Constant	-0.285		-0.289	
	(0.223)		(0.224)	
atanh rho	-12.067		7.296	
	(570.297)		(162.138)	
rho	1		0.999	
Wald test (rho=0): $chi^2(1)$	2.04		2.26	
Prob > chi^2	0.153		0.133	
Wald $chi^2(10)$	52.22		34.13	
Prob > chi^2	0.000		0.000	
Log likelihood	-239.480		-241.072	
Number of Obs.	246		246	
Censeroed Obs.	100		100	
Unsencered Obs.	146		146	

Note: Standard errors in parenthesis. **, * and † denote statistically significant at 1%, 5%, 10%, respectively.

is not necessary lessened as a result of nationalization. This is clear also from the fact that the coefficient of dummy variable on nationalization are not significant.

It is most interesting to note how the efforts made by local authorities independently affect the job creation in special zones. The estimated results indicate that the local authorities that have implemented related programs since before the approval of special zones are more likely say that there is the effect of special zones than the local authorities that have not implemented any job creation programs related to special zones. Moreover, after the introduction of special zones, there is no significant difference in the job creation effect between the local authorities that implemented related programs and the local authorities that did not implement such programs. The use of deregulation programs is in fact a low-cost means unaccompanied by fiscal measures, but the existence of independent programs for creating employment is still important to increase the quantitative effect on employment. Using the regulatory exceptions to complement local industrial and employment policies is understood to have been successful in the local authorities that have implemented related programs since before the introduction of special zones.[11]

The results of comparison and analysis of the local authorities that implemented special zones for structural reform indicate that the (subjective) effect of special zones on the quantitative aspect of employment depends on the period of duration in which they work on their special zones before and after the regulatory exceptions are nationalized and that it is important to make the best use of special zones to complement the independent industrial and employment policies of local authorities in order to secure greater effects.

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[11] Regarding the characteristics of related programs, I separately analyzed the parties that implemented programs and the details of the programs. However, as calculation did not converge with the estimation model considering selection, probit estimation was conducted using only the second-stage samples of responses made as to the degree of effect on employment. As a result, the ratio of the local authorities that reply there is the effect of special zones on employment is significantly higher in the case of the local authorities saying that "there are relevant programs established and implemented independently" or that they have "implemented relevant non-fiscal programs" such as supports for new businesses, industry-university cooperation and jobseekers than in the case of the local authorities saying that "there are no programs." Additionally, using special zones to complement industrial and employment policies seems to result in improving the quantitative effect on employment.

IV. Effects of Policies for Special Zones

1. Framework of Analysis

Next, we will try to evaluate the effects of policies for special zones using objective outcomes. However, with regard to the programs which can be implemented only by those who wish to do so as in the case of these special zones, it is difficult to estimate the effects of policies through simple comparison between the outcomes (for instance, the number of employed people) of the areas that have implemented special zones and the outcomes of the areas that have not. This is because the local authorities that applied for plans with stronger motivation to create local employment and higher ability to plan and implement programs are more likely to accomplish the same level of outcomes without introducing special zones. Therefore, it is necessary to estimate the effect of special zones after statistically removing unobserved factors, including motivation.

There are a number of methods for dealing with cases where the implementation of programs correlate with the unobserved factors (called endogeneity problem). Here, an evaluation method called Difference in Differences (hereinafter referred to as "DID")[12] is used.

If we suppose that the unobserved factors specific to local authorities, such as motivation and planning ability, do not change over time, we can remove the factors specific to local authorities by using differences between the outcomes before and after local authorities implemented special zones. Then, comparing differences in the outcomes before and after the implementation of special zones between the areas that have implemented special zones and the areas that have not, we can remove changes occurred in the entire Japanese economy during the time (macro shock) and estimate the net differences in the outcomes between the implementation and non-implementation of special zones. To deal with cases where response to macro shock differed between the local authorities that implemented special zones and local authorities that did not, we can add data of the period having similar macroeconomic changes as

[12] The method for dealing with endogeneity is called Non-Experimental Method, which proposes (i) instrumental variable method, (ii) Difference in Differences, and (iii) matching method. For Non-Experimental Method, refer to Blundell and Costa Dias (2000; 2002) and Kurosawa (2005). Also, Suzuki (2004) discusses policy evaluation methods that suit the characteristics of the Japanese special zone system.

those of the period before and after implementation of special zones and compare changes in the outcomes during the two period (Differentially Adjusted Difference in Differences: DADID).[13] Analysis will be conducted later to consider this point.

The effect of policies obtained from the above evaluation method is the average effect of special zones in the local authorities that "have actually implemented special zones," and is to be clearly separated from the average effect of deregulation in the general population, including the local authorities that have not participated in special zones.[14] It should be noted that this effect of programs cannot be used as a basis to determine whether to nationalize the regulatory exceptions.

Here, based on the current demarcation of city, ward, town and village as of June 2004, the data of 3,123 cities, towns and villages, including Tokyo's 23 wards, are used. Of these areas, the areas that have implemented special zones are the areas approved as special zones in the first approval in April 2003 through the fourth approval in March 2004 and are classified as the special zones related to industry and employment according to the plan classification used in the previous section.[15] (The regulatory exceptions applied to 819 municipalities).

Of these areas, the special zones related to industry-university cooperation and human resources and to industry attraction are classified into one group as "special zones related to industry promotion" (205 municipalities), while the special zones related to farming village and city exchanges and tourism and to agriculture revitalization are classified into another group as "special zones related to agriculture" (614 municipalities).

As outcomes of the special zones, the number of persons (workers) engaged in the agriculture, forestry and fisheries is used to examine the effects of

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[13] Bell et al. (1999). However, for the estimation in this paper, the author used data on changes between 1999 and 2001 as the data of a different period before the implementation of special zones, because the observation figures of three years (1999, 2001 and 2004) could only be obtained due to limitation in the availability of data.

[14] The former is called Average Treatment on the Treated Effect (TTE), while the latter is called Average Treatment Effect (ATE) (Blundell and Costa Dias 2002).

[15] Unlike the analysis of Section III, for the special zones implemented by prefectures, the municipalities to which the regulatory exceptions apply are considered to be the areas where special zones have been implemented. Actually the data of 3,122 municipalities are used, excluding Miyake Village of Tokyo of which 2001 data is not available.

special zones related to agriculture, and the number of persons (workers) engaged in the manufacturing industry is used to examine the effects of special zones related to industry promotion.[16] The data are the number of persons engaged in the private offices of each municipality as released by the Ministry of Internal Affairs and Communications in the Establishment and Enterprise Census in October 2001 and June 2004. Differences in the outcomes before and after the implementation of special zones (namely, the average number of annually increased persons engaged in the offices in 2001 to 2004) are the explained variables for outcome functions.

In order to consider differences in industrial agglomeration among areas, the number of workers and coefficient of specialization of relevant industries at the beginning of the year are introduced as explanatory variables.[17] Based on this, the effects of policies after the implementation of special zones are indicated by the coefficients of dummy variables that identify whether to have implemented related special zones (special zones related to agriculture or industry promotion).

When considering the fact that response to the macro shock varies from implementing areas to non-implementing areas, the data on municipalities as regards changes from 1999 to 2001 are added and estimation is made by pooling the data of the two periods.[18]

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[16] As mentioned in note 6, this questionnaire survey indicates that approximately 70% of the local authorities that "anticipate the effect of special zones on employment" identify target industries and that many respondents point out, as the target industry, manufacturing industry and agriculture in the special zones related to industry promotion and in the special zones related to agriculture and tourism, respectively. As there are a small number of special zones aimed at promoting forestry and fisheries, agriculture, forestry and fishery are treated as one group.

[17] Coefficient of specialization is p_{ij} / p_i. Here, p_{ij} and p_i indicate the composition of workers of industry i in prefecture j and the national average of the composition of industry i, respectively.

[18] As standards for selecting additional comparison period, Bell et al. (1999) mention the period with the same economic environment that is the nearest in time to that before and after the implementation of policies. During the two periods from 1999 to 2001 and from 2001 to 2004, the effective job offer-job seeker ratio slowly increased. Therefore, this paper uses the data of the period of 1999 to 2001 as the comparison period.

Table 4. Job creation effect of special zones（DID)

（Explained variables：Differences in the number of private sector workers between 2001 and 2004 by industry [annual average]）

Explanatory variables	(1) Agriculture, forestry and fishery Coefficient		(2) Manufacturing industry Coefficient	
The number of workers at the beginning of the year	−0.045		−0.042	
	(0.002)	**	(0.000)	**
Coefficient of specialization at the beginning of the year	−0.037		43.511	
	(0.036)		(6.708)	**
Dummy for special zones related to agriculture	0.575			
	(0.627)			
Dummy for special zones related to industry promotion			122.959	
			(18.587)	**
Constant	1.962		−24.206	
	(0.335)	**	(9.612)	*
adj. R^2	0.139		0.761	
F-statistics	169.41	**	3307.55	**
Sample size	3,122		3,122	

Note: Figures in the parentheses are standard errors. Of the explanatory variables, the number of workers and coefficient of specialization at the beginning of the year are of agriculture, forestry and fishery for Column (1) and of the manufacturing industry for Column (2). ** and * denote statistically significant at 1% and 5%, respectively.

2. Estimation Results

Table 4 shows the results of OLS estimation. If special zone coefficient is positive and significant, it indicates that industry-related employment increased in the municipalities to which regulatory exceptions applied more rapidly than in the municipalities to which regulatory exceptions did not apply. The estimation results do not confirm any significant effect in the special zones related to agriculture such as agriculture revitalization and farming village and city exchanges (Column [1]). The questionnaire survey used in Section III also indicates that approximately 35% of the local authorities that implemented agriculture-related special zones “did not assume employment to increase as a result of special zones.” This is probably because the effect of special zones is essentially weak to create employment. Meanwhile, the special zones related to industry promotion, such as industry-university cooperation and industry attraction, enjoy significantly positive effect for local employment of

manufacturing industry (Column [2]).

The estimated coefficient implies that the municipalities to which regulatory exceptions applied created approximately 123 jobs in the manufacturing industry on an annual average basis more than the municipalities to which regulatory exceptions did not apply. The previous questionnaire survey also indicates that the ratio of respondents who reply "assuming no employment increase" is small in these special zones and that they have obtained the effect on employment as expected.

In order to confirm the robustness of the results, estimation was also made considering changes made before the commencement of the special zone system.[19] Table 5 shows the results. In addition, the cross term between "2001 to 2004 dummy," which indicates the period before and after the implementation of special zones, and "special zone dummy" is the variable that indicates the implementation of special zones.

According to the variables that indicate the newly defined effect of special zones, estimated coefficient is negative and non-significant in the special zones related to agriculture (Column [3]), showing no job creation effect as the previous results indicate. The results concerning the effect of special zones related to industry promotion are interesting. According to Column (4), the estimated coefficient of "special zones related to industry promotion" is positive and significant, which means that the average rate of employment increase was high in the areas to which regulatory exceptions applied throughout the two periods. However, the cross term with 2001 to 2004 dummy is negative and non-significant, showing there is no job creation effect of special zones during the implementation of special zones. In other words, the job creation effects of special zones related to industry promotion confirmed by Table 4 also include the effect of macro shock which varies from the areas that have implemented special zones to the areas that have not (for example, the effect of globalized production in the manufacturing industry).

The same results as those above are obtained when the special zones subjected to analysis are limited.

For instance, in order to consider the time lag until the commencement of

[19] The data on the number of workers in each industry in 1999 and 2001 is newly added (pooled), and the average annual increase in each of the two period is estimated by OLS and used as an explained variable. The sample size is 6,244 (=3,122×2).

Table 5. Job creation effect of special zones (DADID)

(Explained variables : Differences in the number of private sector workers between beginning and end of the year by industry [annual average])

Explanatory variables	(3) Agriculture, forestry and fishery Estimated coefficient		(4) Manufacturing industry Estimated coefficient	
The number of workers at the beginning of the year	−0.035		−0.037	
	(0.002)	**	(0.000)	**
Coefficient of specialization at the beginning of the year	−0.081		43.983	
	(0.034)	*	(5.734)	**
Dummy for 2001 to 2004	−4.435		−32.670	
	(0.523)	**	(7.724)	**
Dummy for special zones related to agriculture	1.017			
	(0.834)			
Cross-term between “2001 to 2004” and “special zones related to agriculture”	−0.441			
	(1.178)			
Dummy for special zones related to industrial promotion			74.562	
			(21.684)	**
Cross-term between “2001 to 2004” and “special zones related to industry promotion”			−6.513	
			(30.143)	
Constant	5.787		−6.263	
	(0.407)	**	(9.002)	
adj. R^2	0.069		0.654	
F-statistics	92.85	**	2361.20	**
Sample size	6,244		6,244	

Note: Figures in the parentheses are standard errors. Of the explanatory variables, the number of workers and coefficient of specialization at the beginning of fiscal year are of agriculture, forestry and fishery for Column (3) and of the manufacturing industry for Column (4). ** and * denote statistically significant at 1% and 5%, respectively.

the effect of special zones, the job creation effect of approved special zones was estimated only for first approval plans which were approved between April and May 2003. As a result, regarding employment increase in the related industries from 2001 to 2004 only, a positive and significant job creation effect was confirmed in the special zones related to agriculture as well as industry promotion. However, when changes before special zones are taken into account, these special zones experienced an increase in employment of related

industries both before and after commencement of the special zone system, showing no such employment increase that is unique to the periods before and after implementation of the special zones.

As shown above, regarding the deregulation policies for the special zones related to agriculture and industry promotion, the fact is that many local authorities that had increased the employment of related industries even before implementing special zones applied and participated in the special zone system, and the job creation effect of special zones has not been confirmed at this moment.

V. Summary and Conclusion

There can naturally be two evaluation standards for the special zones for structural reform which aim to revitalize local economies and apply deregulation throughout Japan. In this paper, an attempt was made to examine the effects of the special zone measure in which local governments take initiative in creating local employment using deregulation as their policy means. The results are summarized below.

Firstly, analysis has been made on the factors that increase the subjective effect of special zones by limiting the subject to its effect on job creation. The results indicate that the job creation effect of special zones depends on the periods in which local authorities work on special zones, including the period after the regulatory exceptions are nationalized, and that it is important to use special zones to complement their own industrial and employment policies in order to secure greater effect of special zones.

Secondly, verification has been made on the quantitative effect of special zone policies using the number of workers by the municipalities. As a result, no job creation effect of special zones has been confirmed in relation to the deregulation policies taken up in this paper for industry and employment. This is mainly because the municipalities had increased the employment of related industries even before implementing special zones.

Since the special zone system relies on the initiative of local authorities, it is reasonable that local authorities with high motivation use the special zones bearing “their local strengths” in mind. However, in this questionnaire, only around one-fourth of the local authorities reply that there is job creation effect of special zones, and no effect has been confirmed through comparison

analysis with the areas that have not implemented special zones. As such, no subjective or objective effect of policies has been confirmed. As shown by the analysis results in this paper, the policy measure using the regulatory exceptions do not fully function if the measure is applied alone and independently. Consequently, it is vital for local authorities to use the method by linking it closely with their own job creation programs.

The above conclusions have very important implication in the process of decentralization in the 2000s and beyond. Namely, decentralized local revitalization policies, in which local authorities with high motivation carry out industry and employment programs making full use of their local strengths, imply that the success of the programs depends on their ability to create proper measures and put these into practice. The local policies of Japan after the special zones for structural reform have been rapidly changing to the policies proposed by local governments as seen in the "local proposal-type projects for job creation" of the Ministry of Health, Labour and Welfare. It is vital to continue to improve the policy-making ability of local authorities though policy-planning competition as well as to provide the local management models that suit regional characteristics and build up a system for developing personnel in charge of policy making.

Long- and medium-term evaluation is one of the issues to be tackled in the future. According to the questionnaire survey used in this paper, the special zones are useful for a majority of local authorities for "collaboration with related local parties," such as business firms, universities and residents, and for "drawing attention to their areas." It may take a long time for these local revitalization efforts to lead to job creation. Therefore, it is necessary to evaluate the effects of special zone policies not only form a short-term viewpoint but also from a long-term viewpoint. In addition, as mentioned at the beginning of this paper, the analysis of this paper covers only the effect of policies of the local authorities that participated in the special zone program. Therefore, this paper does not assure that other local authorities can obtain the same effects when deregulation is nationalized. In order to examine the effect of deregulation policies in a real sense, it is necessary to systematically collect the data from inside and outside of special zones and measure average program evaluation as suggested by Suzuki (2004). This is an issue to be addressed in the future.

References

Bell, Brian, Richard Blundell, and John Van Reenen. 1999. Getting the unemployed back to work: The role of targeted wage subsidies. *International Tax and Public Finance* 6, no.3:339-60.

Blundell, Richard, and Monica Costa Dias. 2000. Evaluation methods for non-experimental data. *Fiscal Studies* 21, no.4:427-68.

———. 2002. Alternative approaches to evaluation in empirical microeconomics. *Portuguese Economic Journal* 1 (2):91-115.

Kurosawa, Masako. 2005. Sekkyoku rodo seisaku no hyoka: Rebyu [Evaluating active labor market programs: A review]. *Financial Review* 77, no. 3:197-220.

Ono, Tatsuya. 2003. Kozo kaikaku tokku ga Nippon no keizai shakai wo kasseika suru joken: Shakai jikken toshiteno kozo kaikaku tokku [Requirements for special zones for structural reform to vitalize the Japanese economy and society: Special zones for structural reform as a social experiment]. FRI Research Report Series, no.177, Fujitsu Research Institute, Tokyo.

Suzuki, Wataru. 2004. Kozo kaikaku Tokku wo donoyoni hyoka subekika: Puroguramu seisaku hyoka no keiryo shuho karano kosatsu [How to evaluate special zones for structural reform: Analysis of program evaluation with quantitative method]. *The Journal of the Board of Audit*, no.30:145-57.

Yokoyama, Tadashi. 2002. Kozo kaikaku tokku wo tsujita kisei kaikaku to sangyo shuseki ni kansuru ichikosatsu [Review of regulatory reform through special zones for structural reform and industrial agglomeration]. Discussion Paper for Economic Outlook and Policy Analysis DP/02-3, Cabinet Office, Tokyo.

Yugami, Kazufumi. 2007. Kisei kanwa wo katsuyoshita koyo soshutsu: Kozo kaikaku tokku no koka [Job creation using deregulation: Effect of special zones for structural reform]. In Chiiki Koyo Soshutsu no Shinchoryu: Tokei Bunseki to Jittai Chosa kara Mietekuru Chiiki no Jittai [New trend of local job creation: Actual local situation seen from statistical analysis and survey], JILPT Project Research Series, no.1:165-96. Tokyo: The Japan Institute for Labour Policy and Training.

Present Situation and Issues of Municipal Employment Strategy

Hiroaki Watanabe
The Japan Institute for Labour Policy and Training

I. Introduction

The environment surrounding regional employment measures has been changing rapidly during the past several years.[1] For instance, more and more local governments have replaced the central government as the policy maker. It is because it has become difficult to support employment in regional communities by expanding public works, as financial situation has deteriorated due to prolonged recession. As for laws and regulations, the Comprehensive Decentralization Act (2000) has clearly defined roles between the central government and local governments and set forth a policy to transfer authority to municipalities. Municipalities have become the principal player in regional employment measures, and more and more policies take into consideration the situation of each region. Furthermore, it is expected that employment policies will be implemented by municipalities based on the Revised Employment Measures Act (2000) and the amendment of Employment Security Act (2003).

It is expected that employment issues would have high priority among all policies and require an urgent measure at municipalities where the unemployment rate is high. The reasons for unemployment are likely to be different by municipality depending on the social and economic background, and measures should be adopted taking these reasons into consideration. If some municipalities take appropriate measures for employment and some, facing the same situation, do not, what factors separate them? It is expected that municipalities will take more initiative in employment policies. But what are really the issues? It is the objective of the present study to confirm how municipalities, facing very different employment situation, are coping with employment issues in this period of transition.

Existing studies on regional employment focus on qualitative research,

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[1] The following description is cited from Itoh and Yugami (2005, 341*ff*.). Higuchi (2005) and Higuchi and Giguère (2005, 11-12) were also consulted in organizing the survey result.

mainly on collection of successful cases. They do not reveal an overall picture. They do not verify the results of qualitative analysis by testing them quantitatively. I wish to understand the present situation of regional employment strategies by referring to vision and leadership of regional development by implementing a survey targeted at municipality mayors. The present study was also motivated by these factors.

The quantitative approach by a questionnaire survey is used as the survey method. Two questionnaire surveys were conducted; one targeted at prefectural governors and municipality mayors, the other at officials in charge of employment issues at prefectures and municipalities. Only the data of municipality mayors and municipal officials are analyzed.

Section II summarizes the historical trend of existing studies. Section III summarizes present employment situation of municipalities. Section IV examines visions of municipalities on job creation strategy. Section V gives an overview of employment measures and organizations. Section VI examines issues and problems in implementing measures. It focuses especially on whether local governments have the necessary human resources to cope with job creation by themselves and human resource development of policy makers. The final section summarizes the discussions and present issues for regional employment strategy.

II. Issues of Studies on Regional Employment Policies

It should be questioned what employment policies are at the regional level. Saguchi (2004) points out that there is no common understanding about this issue due to diversity of regional employment issues. Though regional employment issue is diverse, almost uniform measures are taken nationwide. Therefore, it is regarded that there is no need for each region to have its own employment measures. It is because municipalities, regional organizations and people have not taken the initiative. It is only recent that some municipalities started to have their own employment measures in planning their own job creation plan. However, officials in charge of employment issues do not realize that they have more alternatives in making policies and do not effectively incorporate municipalities in drawing up and implementing employment policies although they usually have contact with citizens. Saguchi brings the following points to attention:

(i) It is more effective to cope with employment problems in cooperation with other organizations, including private entities with a public nature such as NPO, as employment issues have become diverse.
(ii) In cooperation with other organizations rooted in the same region, it is important to pay attention to both demand and supply sides and to cope with the issue with care.
(iii) A municipality should take the leadership in employment measures of the locality and realize a fair and sustainable system.
(iv) It is required to establish a strategic center for regional employment measures, equipped with research, study and policy draw-up capabilities.

Saguchi's discussion starts from the point that regional employment measures tend to become "employment development as a small part of an industrial promotion measure or a makeshift employment measure." In fact, there is a close relation between regional employment policy and regional industrial policy. Suzuki (2004) points out the following. Based on the assumption that there is an industrial accumulation in a region, it is necessary for the municipality to draw up an industrial policy to cope with the industrial accumulation in order to grade up the regional industrial policy. And it is necessary for municipal officials to improve specialty skills. A regional industrial policy should be implemented based on the natural environment and existing industrial accumulation in the region. A regional industrial policy is not necessarily the same as a strategic industrial policy of the central government such as high-tech industry development. As industrial accumulation tends to cover a number of municipalities, both prefectural and municipal industrial policies will be necessary at the same time in the future. Therefore, it is inevitable to decentralize regional industrial policy. It is required to have municipal officials with coordination skills to make a development plan to match the regional industrial accumulation and to incorporate regional researchers and technicians in a joint industry-university research. It would be inevitable to train specialists with special skills to cope with specific administrative issues.

Higuchi (2005) contends that regions should take the initiative in job creation and make an employment strategy in order to train and allocate necessary and motivated people. Financial resources have been transferred to local governments and the authority of municipalities has been reinforced. Under these circumstances, Higuchi points out that regions will require leaders

to make and implement a policy. It is necessary to train leaders and to have a regional human resource strategy for regional revitalization. Higuchi also argues that municipalities should set a clear target of the strategy, discuss who will take the initiative and how they should promote cooperation, discuss strategy to realize the target, and revise it based on impact verification.

Saguchi (2006) sets the following conditions for a regional employment policy: (i) Local governments should take the initiative in the planning and execution and be responsible for the results; (ii) the policy idea is specified, and there are consistent and systematic measures to realize it; and (iii) the policy idea has its own significance and is not just a part of an economic policy or regional development in general. That is to say, there should be promotion of effective support both to the demand and supply sides, in addition to usual support for human resource investment and support for companies to stimulate labor demand, focusing on organizations that act as agents in the labor market at the regional level. According to Saguchi, it is important to determine to what extent private companies can participate in a regional policy, to decide the target of the policy from the point of view of efficiency, fairness and sustainability, and then to decide which entity should be responsible for the policy. He also argues that public employment services (Hellowork) should be involved in regional policy and measures in an active and flexible way.

They all insist that regional human resource development is inevitable in dealing with regional industrial policy and regional job creation policy in the future. The importance of human resource development at the regional level has been often pointed out by surveys, including Nippon OMNI-Management Association (2004), Nakamuara (2004) and Inatsugu (2006). Ito (2005) says that the central government and central government agencies should organize and expand the system of education and human resource development to improve planning skills in dealing with employment issues. He then states that heads of local governments should have strong leadership and his/her staff should prepare a plan on industrial development and job creation to suit the characteristics of their own regions.

Many existing surveys and researches on regional employment are based on case studies. Many of those cases are either successful cases or cases of pioneer regions that have gained much attention. The followings are the characteristics of the typical cases: (i) Many cases are endogenous job creation "making use of regional resources"; (ii) regional players take the initiative in

many cases; (iii) in some cases, the administration takes the initiative in dealing with regional job creation. In others, the private sector leads regional development with assistance from the administration; (iv) the role of the third sector and NPOs is important; (v) human resource development at the regional level is one of the main pillars; (vi) many region communities make use of external human resources; and (vii) the effectiveness of the undertaking is assessed in few cases. These are the common points.

In the section below, we examine whether these points can be confirmed quantitatively.

III. Employment Situation of Municipalities

Firstly, the employment situation of municipalities replying to the questionnaire is examined based on the unemployment rate and effective job offer-job seeker ratio. The average unemployment rate of municipalities is 4.1%, both according to the unemployment rate by municipality in the 2000 Population Census and the Japan Institute for Labour Policy and Training's questionnaire survey conducted in 2004. Figure 1 is a statistical map of the unemployment rate by municipality replying to the questionnaire. The map demonstrates disparity among municipalities even within the same prefecture.

Figure 2 is a statistical map of the effective job offer-job seeker ratio. The average ratio of villages is higher than that of cities and towns, but dispersion of village data is larger.

IV. Regional Employment Strategy of Municipalities

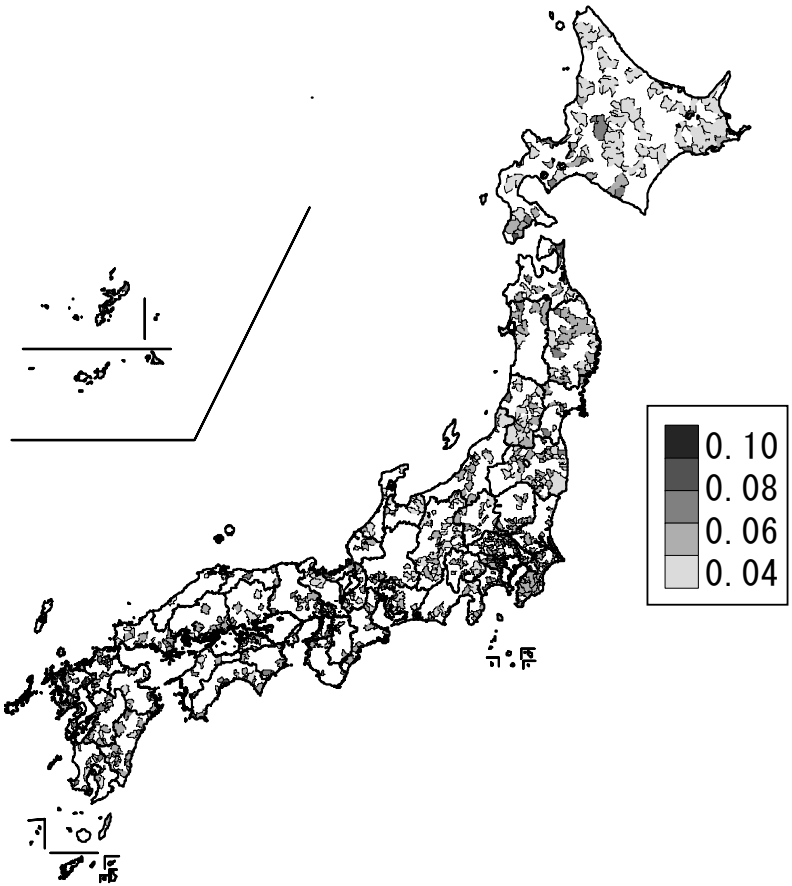
This section examines how mayors and officials of municipalities regard employment issues and how they are coping with them.

1. Position of Employment Issues in Regional Development

Figure 3 shows the results of the cross tabulation by municipality based on how mayors regard employment issues. Generally, many municipalities see the issues as "one of the regional development issues." The ratio of municipalities placing employment issues as the top-priority issue is higher in towns than in cities and higher in villages than in towns.

Employment/unemployment indicators such as the unemployment rate and

Figure 1. Statistical map of unemployment rate



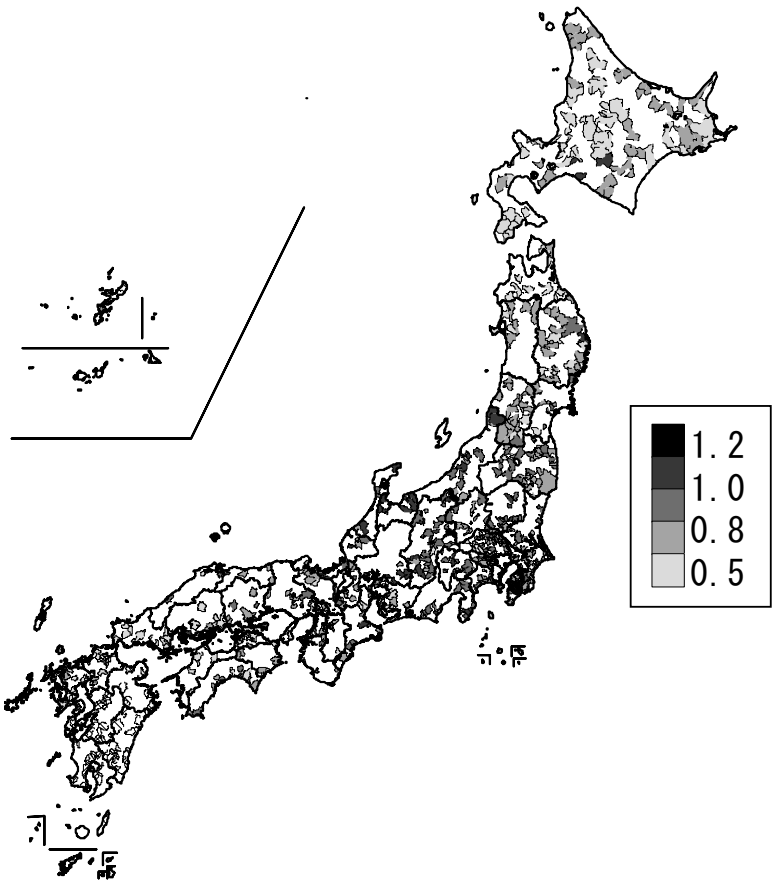
Note: The unemployment rate from *the 2000 Population Census*. Municipalities that did not respond to the survery are shown in white.

effective job offer-job seeker ratio is related to municipal divisions but not to how the mayors regard employment policies.

2. What Type of Job Creation Is Given Priority?

What kind of strategies do municipal mayors consider important as a strategy to solve regional employment issues? Figure 4 is compiled from the results of cross tabulation by municipal group. A different group of mayors places importance to different measures. Villages tend to place importance to

Figure 2. Statistical map of effective job offer-job seeker ratio



Note: Municipalities that did not respond to the survey are shown in white.

endogenous job creation more than cities and towns do because of the reasons given below replied in the free response method. Some mentioned geographical constraints, i.e., there is not adequate land even though they wish to take exogenous job creation measures such as inviting companies to relocate in their regions. Some say that they are not able to provide workers for the relocated companies.

On the other hand, there is a tendency of a municipality to place importance on exogenous job creation measures if the municipality has already succeeded in inviting companies to build an industrial accumulation or it faces a limit to

Figure 3. Position of employment issue among all issues of municipalities

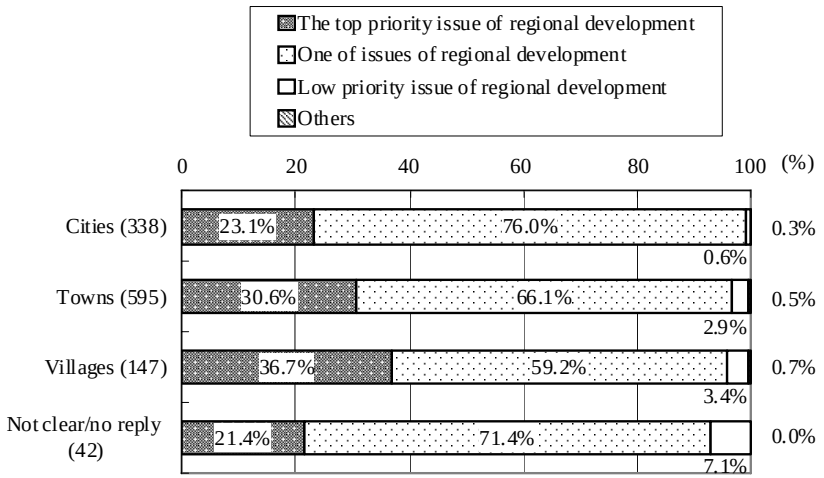
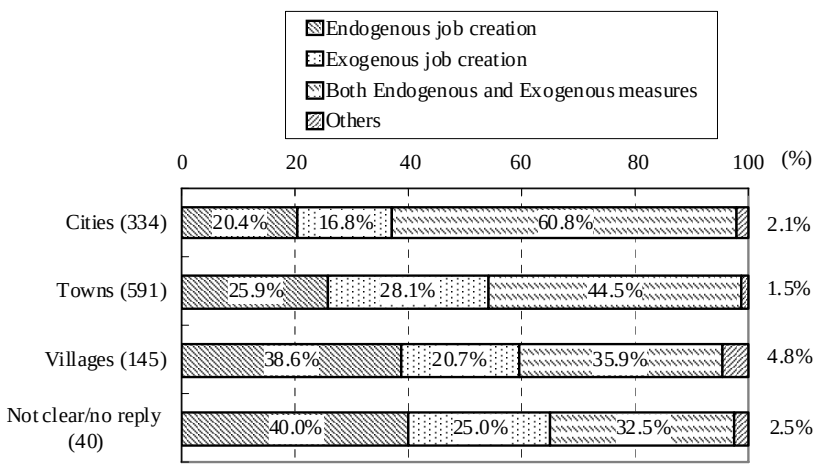
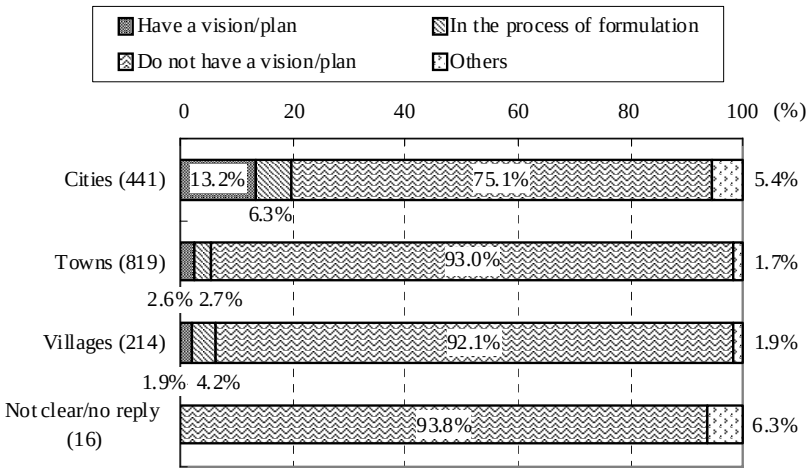


Figure 4. Important strategies for solving regional employment problems for mayors of municipality groups



job creation by local companies. Furthermore, municipalities placing equal importance to endogenous and exogenous measures say inviting companies in growth industries by use of tax incentives and land subsidy is expected to be more effective in creating jobs than relying on existing companies to contribute to revitalization of the economy.

Figure 5. Existence/nonexistence of visions and plans on promoting employment



3. Existence/Nonexistence of Vision and Plans on Job Creation

Whichever type of measures is given the priority, do the measures substantiate municipalities' vision on job creation?

Figure 5 is a summary of replies on existence/nonexistence of visions and plans on promoting employment by municipality group. Overall, the majority of municipalities replied that they do "not" have a vision or plan. Even in cities where the ratio of those with a vision or plan is relatively high, it is only 13%. In towns and villages, the ratio is less than 3%. Though there is a plan on regional industrial policy, the target is not clear as to how much employment they expect to create. The relation between industrial policy and job creation policy is not clear either.

The upper part of Table 1 shows the estimated results of a log linear model of the level (central government, prefecture or municipality) at which mayors consider job creation should be undertaken and existence/nonexistence of a vision and plan. Similarly, the lower part of the table shows the log linear model of the level at which municipal officials in charge consider job creation should be undertaken and existence/nonexistence of a vision and plan. In the case of the "central government," the main effect is positive and statistically significant. In the case of "municipalities," it is negative and statistically significant. In the case of "have a vision/plan" and "in the process of

Table 1. Existence/nonexistence of vision and plan and principal player of job creation (Log linear model)

	Vision/plan of job creation			Main effect
	Have a vision/plan	In the process of formulation	Do not have a vision/plan	
Expected principal player of job creation in the view of mayors				
Central government	0.315	-0.252	-0.008	0.513***
	(-1.596)	(-0.988)	(-0.060)	(-4.201)
Prefectures	0.007	0.303	-0.052	0.069
	(-0.032)	(-1.183)	(-0.363)	(-0.508)
Municipalities	-0.867***	0.323	0.093	-0.330**
	(-2.599)	(-1.111)	(-0.562)	(-2.082)
Main effect	-0.411***	-0.981***	2.357***	
	(-2.793)	(-5.895)	(-26.887)	
Expected principal player of job creation in the view of officers in charge				
Central government	0.802	-0.461	1.544*	2.560***
	(-0.677)	(-0.427)	(-1.712)	(-3.028)
Prefectures	1.006	0.445	1.606*	1.609*
	(-0.817)	(-0.398)	(-1.694)	(-1.800)
Municipalities	0.191	-0.622	0.666	1.846**
	(-0.155)	(-0.548)	(-0.713)	(-2.102)
Chamber of commerce and industry, society of commerce and industry, etc.	0.511	0.125	1.866*	1.099
	(-0.393)	(-0.106)	(-1.877)	(-1.166)
Main effect	7.13E-17	0.511	1.946**	
	(0.000)	(-0.495)	(-2.230)	

Note: Standardized effect is shown in parentheses. *** is statistically significant at the 1% level, ** at 5%, and * at 10%.

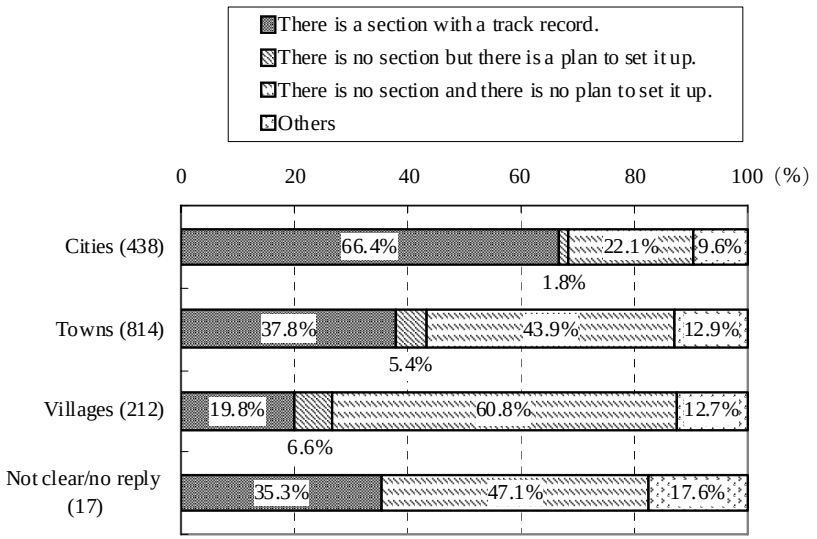
formulation" of a vision or plan on job creation, it is negative and statistically significant, while in the case of "do not have a vision/plan," it is positive and statistically significant.

The interaction effect of municipal mayors considering that creating jobs should be undertaken at the municipal level and existence/nonexistence of a vision and plan is negative and statistically significant. Although municipal mayors think it better that job creation is undertaken at the municipal level, they may not be able to set a concrete vision or plan on how to go about and realize job creation.

Next, in the case of officials in charge of employment issues, regardless of organizations they consider job creation should be tackled by, the interaction effect of replies of "nonexistence" of a vision or plan is positive and statistically significant. (It is not significant for municipalities.)

It seems contradictory that those municipalities considering that job

Figure 6. Existence/nonexistence of a section to deal with job creation measures at municipalities



creation should be undertaken at the municipal level do not have a vision or plan. But a problem lies in the gap between their recognition for the need for them to take the leading role in job creation at the municipal level and the lack of a clear vision on how their regional communities should be. It is considered that assistance to fill this gap will be one of the roles that the central government and prefectures should take in the future. Municipalities should be able to take the initiative in implementing measures for employment based on a clear vision and plan.

4. Section in Charge of Job Creation Measures at Municipalities

Figure 6 shows the share of municipalities installing a section that deals with job creation measures. A majority of cities have a section with a track record. Meanwhile, 40% of towns and 60% of villages do not have a specific section and do not have a plan to establish such a section in the future either. In this regard, there is disparity among municipality groups in their stance to deal with job creation.

What is the difference between municipalities with a specific section (official) and those without? Table 2 shows the estimated results of a log linear

Table 2. Existence/nonexistence of vision/plan and of official in charge of job creation (Log linear model)

	Section that deals with job creation			Main effect of existence/ nonexistence of vision/plan
	With a track record	Plan to set up	No plan to set up	
Vision/plan on job creation				
Have a vision/plan	0.800***	-0.125	-0.482***	1.307***
	(-3.771)	(-0.689)	(-4.377)	(-12.601)
In the process of formulation	-0.511	0.320	-0.138	-1.203***
	(-1.038)	(-0.939)	(-0.615)	(-5.646)
Do not have a vision/plan	-0.201	-0.006	0.683***	0.222
	(-0.715)	(-0.027)	(-4.792)	(-1.609)
Main effect of the section	-0.891***	-0.623***	2.399***	
	(-4.525)	(-4.104)	(-25.299)	

Note: Standardized effect is shown in parentheses. *** is statistically significant at the 1% level, ** at 5%, and * at 10%.

model. The interaction effect of "existence of vision/plan" and "existence of specific section" is positive and statistically significant at the 1% level. Meanwhile, interaction effect of "existence of vision/plan" and "non-existence of a specific section" is negative and statistically significant at the 1% level. Therefore, it is considered that there is a relation between existence of a vision or plan on job creation and existence of a specific section with a track record.

The interaction effect of "nonexistence of vision/plan" and "existence of specific section with a track record" is negative and is not statistically significant. The interaction effect of "nonexistence of vision/plan" and "non-existence of specific section" is positive and statistically significant at the 1% level. Therefore, it is considered that existence/nonexistence of a vision or plan leads to existence/nonexistence of a specific section as well as municipalities' stance on job creation.

Existence of a vision or plan and a specific section is not sufficient to create employment in a region. What is required of such a section is to substantiate the vision or plan and make a framework for creating jobs. Many municipalities say that making use of local resources is an important point in drawing up a vision or plan. But it is a problem that this is not connected systematically with actual creation of employment. It would be expected of municipalities in the near future to play the role of devising a framework for connecting the two and to substantiate such a framework (The Japan Institute

of Labour 1997, 8-9). [2]

In all three municipality groups, the section of commerce and industry (tourism) or section of commerce, industry and labor are in charge of job creation measures. This may be because regional employment issue is closely related to regional industrial promotion, and creating jobs is regarded as an extension of regional industrial promotion.

V. Implementation of Job Creation Measures and Its Factors

1. Implementation of Job Creation Measures

Figure 7 and Figure 8 show implementation of job creation measures in fiscal year 2003 and 2004, respectively. “Company invitation,” “subsidy to venture companies” and “others” were popular measures in fiscal year 2003. At the same time, more than 50% of towns and nearly 70% of villages replied that they had done “nothing special.” The trend is the same in 2004. The most popular measure was “invitation of companies” with 30% of municipalities, followed by “subsidy to venture companies” and “others.” The proportion of municipalities replying that they had done “nothing special” was also high in fiscal year 2004.

2. Factors for Implementation of Job Creation Measures

A regression analysis is made to identify determinant factors for implementation of job creation measures by setting implementation of measures as an explained variable (“implemented” = 1 and “not implemented” = 0). Explanatory variables are municipality group (city as the base, towns and villages as dummies), population (population of 30,000 to 100,000 as the base), ratio of service industry to manufacturing industry (ratio of service-sector employees/total employees to manufacturing-industry employees/total

[2] Other replies can be grouped into four: (i) Other section takes care of the issue concurrently; (ii) there is a section but it has no track record; (iii) it is not clear as the municipality will merge with other municipalities very soon; and (iv) others. Municipalities of case (i) are considered to have a division to deal with job creation though it is not specifically dedicated to the task. The reason of a section without a track record at municipalities of case (ii) will be examined later when analyzing issues regarding improvement of job creation measures.

Figure 7. Measures implemented in fiscal year 2003

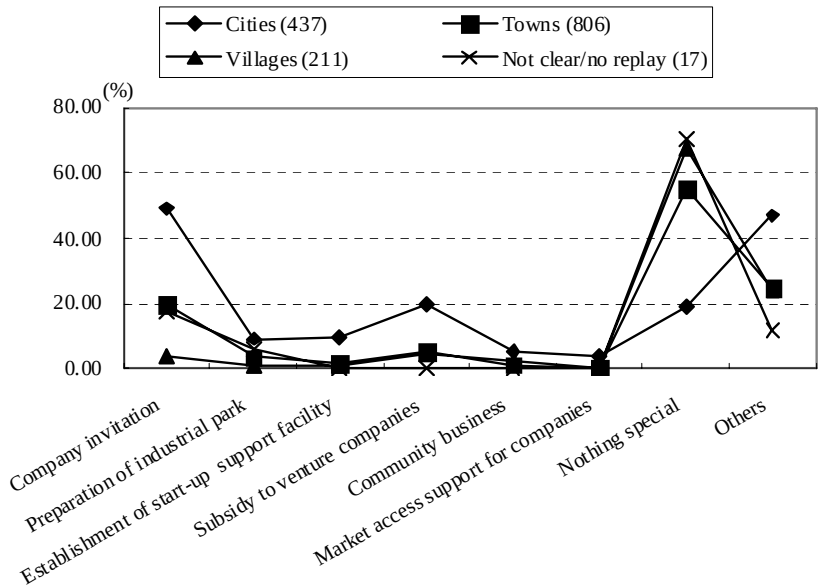
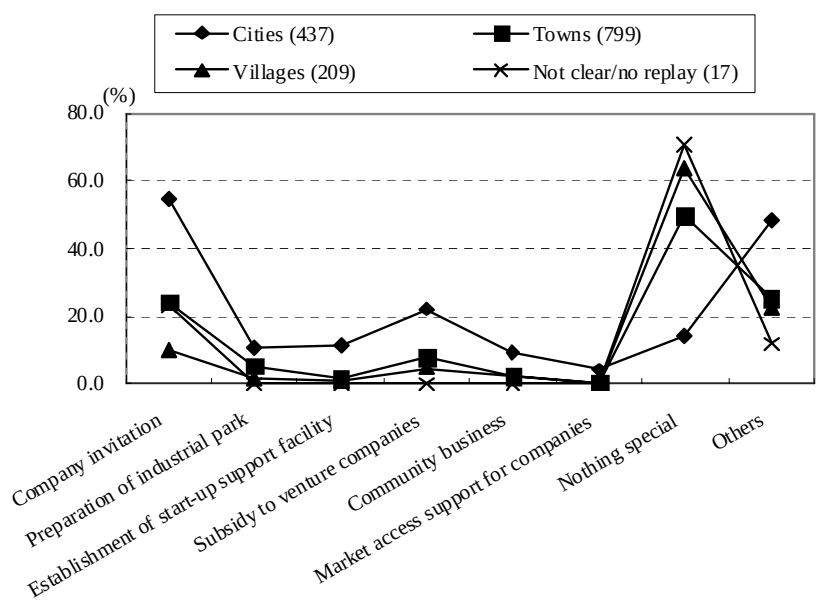


Figure 8. Measures implemented in fiscal year 2004



employees),[3] policy issue dummy (employment issue as the highest priority issue = 1, otherwise = 0) and vision dummy (existence of a vision/plan on job creation = 1, otherwise = 0). Table 3 summarizes the results of a binary logistic regression analysis.

Table 3 shows that municipalities giving employment issues the top priority have a positive and statistically significant coefficient in "invitation of companies," "preparation of industrial park" and "other measures." It is considered that they are implementing measures. Meanwhile, the coefficient of "not implementing measures" is negative and statistically significant. Therefore, considering employment issue as the top priority issue is considered to have some kind of impact on implementation of measures.

As for the variable "existence of vision/plan," the coefficients of such measures as "invitation of companies," "company subsidies," and "others" are positive and statistically significant. Therefore, it is considered that "existence of vision/plan" has an impact of promoting the implementation of these measures.

As for municipality groups, the coefficient of the "villages" is negative and statistically significant as regards implementation of the measures for "company invitation." It is considered, as it was already discussed, that villages are not likely to invite companies as much as cities do because of their geographical conditions and the limited number of workers they have for the new companies, as the proportion of the population of senior citizens is high, which is an issue not explicitly dealt with here. On the contrary, the coefficients of the "towns" and "villages" are positive and statistically significant as regards the variable of "not implementing any special measures."

As for the population size, "30,000 to 100,000" is set as the base, and anything smaller than this size is negative and statistically significant as regards measures such as "invitation of companies" and "preparation of industrial park." This means that municipalities with a fewer population than the standard have not implemented measures. Meanwhile, municipalities with a larger population than the standard have positive and statistically significant coefficients as regards measures such as "establishment of start-up support facility," "subsidy to companies," "support of community business," and "market access support." This means that municipalities with a larger population

[3] This variable indicates how much a region's economy relies on the service industry.

Table 3. Regression analysis of implementation of job creation measures in fiscal year 2003 (Binary logistic regression model)

	Company invitation	Preparation of industrial park	Establishment of start-up support facility	Subsidy to venture companies	Community business operation support	Market access support for companies	Nothing special	Others
Constant	-0.738***	-3.401***	-3.812***	-1.915***	-3.421***	-4.457***	-0.674***	-0.378
	0.254	0.514	0.692	0.355	0.688	0.928	0.257	0.233
	0.478	0.033	0.022	0.147	0.033	0.012	0.510	0.685
Employment as top priority dummy	0.437*	1.269***	0.062	0.068	-0.162	0.604	-0.730***	0.520**
	0.227	0.338	0.442	0.318	0.562	0.613	0.262	0.215
	1.548	3.556	1.064	1.070	0.851	1.829	0.482	1.682
Vision dummy	0.491*	0.457	0.721	0.782**	0.405	-0.039	-1.262***	0.599**
	0.277	0.458	0.448	0.320	0.582	0.789	0.453	0.273
	1.635	1.579	2.056	2.187	0.487	0.962	0.283	1.821
Service/manufacturing ratio	0.587*	0.909	-0.078	0.421	-0.290	1.138	-0.985***	0.361
	0.352	0.681	0.846	0.493	0.913	1.214	0.340	0.315
	1.798	2.483	0.925	1.524	0.748	3.120	0.374	1.434
Town dummy	-0.317	-0.100	-1.119	-0.758*	-1.054	-15.641	0.868***	-0.621**
	0.293	0.584	0.875	0.443	0.726	2397.547	0.293	0.283
	0.728	0.905	0.327	0.469	0.349	0.000	2.382	0.537
Village dummy	-1.567***	-0.093	-18.542	-0.579	-0.148	-30.647	1.451***	-0.810*
	0.578	1.014	4730.355	0.705	1.038	4702.823	0.410	0.420
	0.209	0.911	0.000	0.561	0.862	0.000	4.266	0.445
Population dummy (less than 5,000)	-0.968**	-1.187	1.350	-0.406	0.906	-1.066	0.739*	0.331
	0.480	1.007	1.386	0.700	1.096	4783.575	0.390	0.407
	0.380	0.305	3.857	0.667	2.474	0.344	2.093	0.718
Population dummy (5,000 to 10,000)	-0.746**	-1.609*	0.863	-0.623	-16.701	14.461	0.363	0.180
	0.359	0.914	1.181	0.586	3408.770	2397.547	0.330	0.328
	0.474	0.200	2.391	0.536	0.000	1906845.8	2.093	1.198
Population dummy (10,000 to 30,000)	-0.678**	-0.236	0.829	-0.367	1.213*	-15.103	0.427	-0.353
	0.299	0.589	0.853	0.443	0.710	2465.837	0.293	0.286
	0.508	0.790	2.291	0.693	3.364	0.000	1.438	0.703
Population dummy (100,000 to 300,000)	0.429*	0.406	2.344***	-0.065	1.224**	1.336**	-0.380	0.116
	0.238	0.417	0.523	0.321	0.541	0.592	0.317	0.237
	1.535	1.501	10.424	0.937	3.401	3.804	0.684	1.123
Population dummy (over 300,000)	0.473	-0.061	2.854***	1.323***	0.127	0.505	-1.380*	-0.231
	0.400	0.798	0.624	0.425	1.110	1.137	0.760	0.402
	1.605	0.941	17.358	3.756	1.135	1.658	0.525	0.794
-2 log-likelihood	893.543	321.795	258.892	534.141	220.241	127.604	879.177	1005.144
Pseudo R2	0.157	0.100	0.262	0.117	0.102	0.199	0.211	0.081

Note: The figures on the first line of each cell are coefficients, those on the second line are standard errors, and on the third line are Exp (β).
*** is statistically significant at 1% level, ** at 5%, and * at 10%.

have implemented these measures.

The same trend is confirmed by the analysis using 2004 data (omitted here for want of space). In addition to municipality group, population, and the ratio of the service sector, how the municipalities consider job creation and what setup is in place to implement the measures also have a positive impact, even though such an impact is limited.

Next, the relation between existence of a specific section that deals with employment and implementation of such measures is examined by regression analysis. The explanatory variable is existence of a section that is in charge of the measures. If municipalities have a section in charge of such measures with a track record, the variable is 1, and otherwise it is 0. It should be noted that "existence of vision/plan" is excluded in the estimated results.[4] The explained variable and other variables are the same as above. Table 4 is the summary of the estimated results.

As for measures implemented in fiscal year 2003, the coefficients of "invitation of companies," "subsidy to venture companies" and "others" are positive and statistically significant for municipalities with a section with a track record. These municipalities have experience of implementing some kind of measures in comparison to municipalities without such a section. As for municipalities planning to set up such a section, only the coefficient of "invitation of companies" is positive and statistically significant at the 10% level. They have actually implemented the measure of "invitation of companies" more than municipalities without such a section. The other items are not statistically significant. As for the item of having done "nothing special," the coefficient is negative and statistically significant. That means that among the group of municipalities with such a section with a track record, there are a fewer number of municipalities that have not implemented any measures in comparison to the group of municipalities without such a section.

The coefficients of the town dummy and village dummy are both negative. This shows that fewer towns and villages have implemented measures compared with cities. This is the same with the existence/nonexistence of a vision.

As for the results of 2004 (omitted here for want of space), municipalities

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[4] This is because the estimated results were not sufficient when both "existence of vision/plan" and "existence of a specific division that deals with job creation measures" are explanatory variables.

Table 4. Regression analysis of implementation of job creation measures in fiscal year 2003 (Binary logistic regression model)

	Company invitation	Preparation of industrial park	Establishment of start-up support facility	Subsidy to venture companies	Community business operation support	Market access support for companies	Nothing special	Others
Constant	-1.152***	-3.316***	-3.945***	-2.035***	-3.852***	-4.263***	-0.170	-0.809***
	0.280	0.517	0.721	0.390	0.748	1.005	0.279	0.258
	0.316	0.036	0.019	0.131	0.021	0.014	0.844	0.445
Employment as top priority dummy	0.399*	1.286***	0.580	0.078	-0.186	0.252	-0.715***	0.510**
	0.231	0.340	0.442	0.320	0.562	0.681	0.269	0.220
	1.491	3.617	1.060	1.081	0.830	1.287	0.489	1.666
Existence of a specific divition dummy	0.619***	-0.119	0.283	0.246	0.765	-0.269	-0.893***	0.776***
	0.175	0.337	0.387	0.254	0.466	0.563	0.173	0.163
	1.858	0.888	1.327	1.279	0.101	0.744	0.409	2.173
Service/manufacturing ratio	0.506	0.946	-0.134	0.407	-0.430	0.870	-0.916***	0.332
	0.356	0.682	0.848	0.496	0.925	1.277	0.349	0.320
	1.658	2.574	0.874	1.502	0.651	2.386	0.400	1.393
Town dummy	-1.147	-0.150	-1.047	-0.766*	-0.920	-15.572	0.701**	-0.505*
	0.298	0.588	0.880	0.453	0.725	2417.035	0.300	0.288
	0.863	0.861	0.351	0.465	0.399	0.000	2.016	0.604
Village dummy	-1.304**	-0.151	-18.424	-0.516	0.194	-30.546	1.147***	-0.570
	0.583	1.019	4755.610	0.717	1.057	4752.959	0.422	0.430
	0.271	0.860	0.000	0.597	1.214	0.000	3.150	0.566
Population dummy (less than 5,000)	-0.908*	-1.195	1.330	-0.370	0.921	-0.980	0.664*	-0.287
	0.483	1.002	1.386	0.705	1.096	4841.451	0.398	0.413
	0.403	0.303	0.337	0.691	2.511	0.375	1.942	0.751
Population dummy (5,000 to 10,000)	-0.717**	-1.625*	0.849	-0.593	-16.717	14.560	0.335	0.183
	0.362	0.913	1.179	0.591	3382.369	2417.035	0.337	0.333
	0.488	0.197	2.336	0.553	0.000	2104798.9	1.397	1.201
Population dummy (10,000 to 30,000)	-0.654**	-0.240	0.805	-0.432	1.219*	-14.968	0.407	-0.377
	0.303	0.587	0.852	0.450	0.706	2487.362	0.300	0.290
	0.520	0.787	2.236	0.649	3.335	0.000	1.502	0.686
Population dummy (100,000 to 300,000)	0.498**	0.375	2.325***	-0.097	1.204**	1.538**	-0.420	0.078
	0.242	0.418	0.522	0.321	0.539	0.637	0.322	0.242
	1.645	1.455	10.231	0.907	3.335	4.653	0.657	1.081
Population dummy (over 300,000)	0.447	-0.071	2.793***	1.262***	0.007	0.720	-1.321*	-0.385
	0.404	0.800	0.625	0.427	1.111	1.167	0.770	0.408
	1.564	0.931	16.325	3.531	1.007	2.055	0.267	0.681
-2 log-likelihood	870.873	320.419	258.038	525.317	216.879	120.661	844.563	972.257
pseudo R2	0.172	0.101	0.263	0.124	0.115	0.200	0.248	0.120

Note: The figures on the first line of each cell are coefficients, those on the second line are standard errors, and those on the third line are Exp (β). *** is statistically significant at 1% level, ** at 5%, and * at 10%.

with such a section with a track record have positive and statistically significant coefficients as regards "company invitation," "preparation of industrial park," "establishment of start-up support facility," "subsidy to ventures," "market access support for companies," and "others." That means that more municipalities with such a section with a track record implemented the measures compared to municipalities without such a section. As for having done "nothing special," the coefficient is also negative and statistically significant. That means that fewer municipalities with such a section with a track record have not implemented any measure compared with municipalities without such a section.

The coefficients of towns and villages are negative and statistically significant, which means that they have not implemented job creation measures as much as cities have. As for the item of having done "nothing special," the coefficient is positive and statistically significant.

Having a section for job creation measures leads to implementation of some kind of measures. This result is logical and may not need to be pointed out. It is considered that setting up a section (or an official) is the first step in dealing with creating jobs at the municipal level. [5]

VI. Issues of Regional Employment Strategies

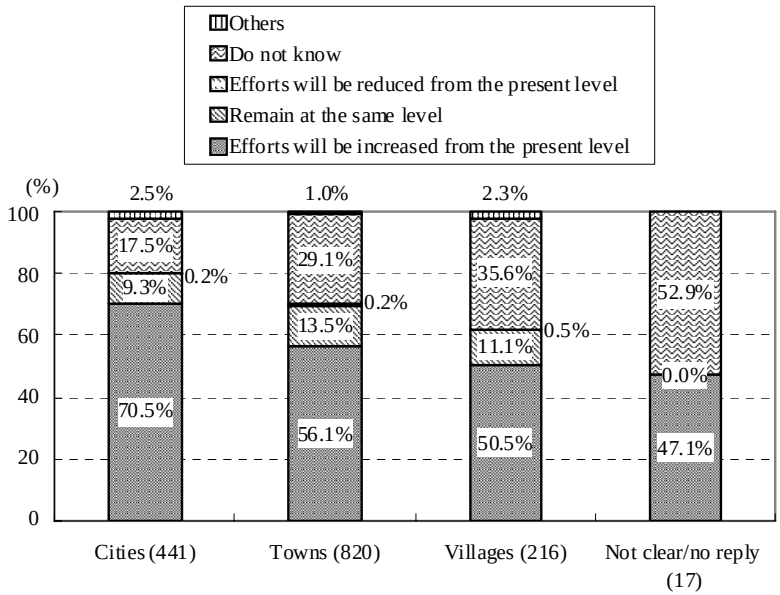
1. Reinforcement of Efforts for Regional Job Creation

What kind of policy does each municipality have regarding tackling job creation? Figure 9 summarizes the responses. The ratio of municipalities insisting it is necessary to reinforce efforts is highest in cities, followed by towns and then villages.

What kind of problems and issues does each municipality face in strengthening measures? The reponses were given using the free descriptive method. Replies were as follows: (i) Lack of human resources (48 cities, 62 towns, 20 villages, total of 130 municipalities); (ii) shortage of financial

[5] Developments regarding regulatory exceptions in the special zones for structural reform and approval of regional renovation plans are being watched with keen interest. As regards cities, 24% and 14% have applied for the status of the special zone for structural reform and for approval of regional renovation plans, respectively. There are few towns and villages that have applied.

Figure 9. Need to reinforce efforts in job creation



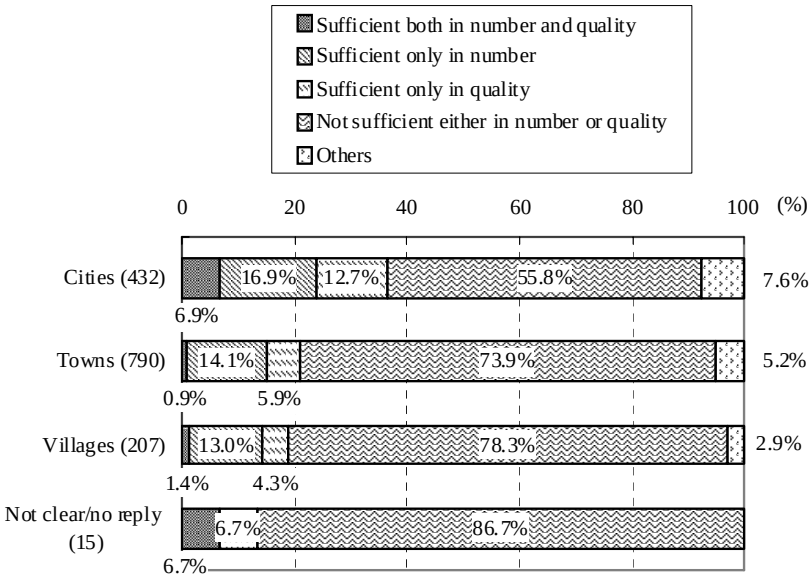
resources (budget) (45 cities, 45 towns, 5 villages, total of 95 municipalities); (iii) lack of information (43 cities, 38 towns, 6 villages, total of 87 municipalities); and (iv) lack of know-how on employment measures (32 cities, 37 towns and 9 villages, total of 78 municipalities).[6] "Human resources" here could mean both human resources of municipal officials as policy makers and human resources in general in the locality and local companies. Moreover, human resources can be divided into the quality and volume of the resources. As for information, the municipalities gave examples such as statistical information on employment/unemployment, industrial policy, concrete methods and know-how of job creation, regional promotion measures, and information on job offers and job seekers.

2. Situation Regarding How the Issues Are Addressed

The largest number of municipalities said that securing human resources was the priority issue for the future. This section examines in detail the number and quality of officials planning employment measures. Figure 10 is the

[6] Free descriptive answers were treated as multiple replies.

Figure 10. Sufficiency of officials in charge of employment measures



summary of the cross tabulation of existence/nonexistence of such officials and municipality groups.

Overall, the majority of municipalities replied “not sufficient either in number or quality.” Such a ratio is highest at villages, followed by towns and then by cities.

Multinomial logistic regression analysis is done to examine determinant factors for existence/nonexistence of human resources at municipalities. Explained variable is “existence/nonexistence of human resources.” Explanatory variables are the dummy variable of population (30,000 to 100,000 as the base), the dummy variable where “existence of vision/plan on job creation = 1,” the dummy variable where “existence of a section of job creation measures = 1,” the dummy variable where “participation in training and willingness to continue training = 1,” and the dummy variable of municipality group (city as the base). Table 5 shows the estimated results. The coefficients of “existence of vision/plan” are positive and statistically significant. As regards “existence of a section,” the coefficients are significant when “sufficient both in number and quality,” “sufficient only in number,” “sufficient only in quality.” In other words, municipalities with a vision of job

Table 5. Result of multinomial logistic regression analysis on sufficiency of policy makers

Explained variables: Explanatory variables	B	Standard errors	Significance	Exp (B)
Sufficient both in number and quality:				
Constant	0.511	2.178		
Population dummy (less than 5,000)	0.236	1.268		0.789
Population dummy (5,000 to 10,000)	-0.392	1.161		1.480
Population dummy (10,000 to 30,000)	-0.246	0.914		1.279
Population dummy (100,000 to 300,000)	0.453	0.517		0.635
Population dummy (over 300,000)	0.898	0.770		0.407
Dummy of existence of vision	0.964	0.511	*	0.381
Dummy of existence of a section	1.993	0.647	**	0.136
Town dummy	-0.686	0.911		1.985
Village dummy	0.297	1.268		0.743
Training dummy	1.336	0.656	**	0.263
Sufficient only in number:				
Constant	0.493	1.226		
Population dummy (less than 5,000)	0.148	0.521		0.863
Population dummy (5,000 to 10,000)	-0.375	0.457		1.455
Population dummy (10,000 to 30,000)	0.121	0.382		0.886
Population dummy (100,000 to 300,000)	-0.068	0.328		1.070
Population dummy (over 300,000)	0.202	0.590		0.817
Dummy of existence of vision	0.295	0.362		0.745
Dummy of existence of a section	1.309	0.235	***	0.270
Town dummy	0.010	0.378		0.990
Village dummy	0.205	0.561		0.815
Training dummy	0.817	0.475	*	0.442
Sufficient only in quality:				
Constant	0.830	1.639		
Population dummy (less than 5,000)	0.295	1.009		0.744
Population dummy (5,000 to 10,000)	0.905	0.721		0.405
Population dummy (10,000 to 30,000)	0.948	0.515	*	0.387
Population dummy (100,000 to 300,000)	-0.022	0.416		1.022
Population dummy (over 300,000)	0.889	0.595		0.411
Dummy of existence of vision	0.481	0.426		0.618
Dummy of existence of a section	1.382	0.365	***	0.251
Town dummy	-1.607	0.569	***	4.987
Village dummy	-0.928	0.893		2.529
Training dummy	1.388	0.512	***	0.250
	-2 log-likelihood		266.304	
	χ^2		121.928	
	p value		0.000	
	pseudo R2		0.190	

creation and a track record already have sufficient human resources both in quality and number. When only the coefficient of municipalities with a section responsible for job creation measures is significant, it means that there is lack of balance either in the number or quality of the human resources.

As for the training dummy, the coefficients were positive and significant in all cases.

3. How to Secure Human Resources to Deal with Employment Issues

What is the difference between municipalities that "already have sufficient number and quality of offcials in charge of employment issues" and other municipalities in how they secure human resources (Table 6). The upper row of each municipality group shows how municipalities that "already have sufficient number and quality of offcials in charge of employment issues" have recruited officials who plan employment measures. It should be noted that the sample size of municipalities having sufficient officials both in number and quality is small. The majority of them replied that "they were transferred from other section within the same office, and they were self-taught without receiving any special training."

As for municipalities "not securing sufficient human resources either in number or quality," a quarter replied as a method of securing resources, "transfer from other section within the same office and provided with special training," and about 20% said, "transfer from other section within the same office and have them educate themselves without providing any special training." Many municipalities replied that they expect to be able to hire experienced people from the central government, prefectures and private companies. Some municipalities have advertised for candidates for the post though the number of such cases is small.

"Others" account for over 40%. Most of them have written in their responses that they have "no plans for securing such officials" or have "no special plans." Many municipalities do not have a prospect of securing such officials. Others wrote that they "cannot afford to employ such staff" or "it is an issue for the future."

As for the methods of training human resources, municipalities that have participated in training and wish to continue the training in the future have a higher ratio of already having secured resources than those without actual experience of or future plans for participation in training. The difference

Table 6. Methods of securing officials in charge of employment issues by municipality group (%)

Sufficiency/ deficiency of human resources by manicipality group	Experience in the central government and prefectures	Experience in the private sector	Transferred from the municipal office and received special training	Transferred from the municipal office and trained themselves	Recruited from outside	Others
Cities						
Sufficient	10.0	10.0	10.0	70.0	6.7	6.7
Deficient	10.5	15.3	28.8	18.3	4.4	44.1
Towns						
Sufficient	0.0	0.0	0.0	57.1	0.0	42.9
Deficient	4.5	9.8	22.7	24.4	4.9	43.6
Villages						
Sufficient	33.3	33.3	0.0	33.3	0.0	33.3
Deficient	4.0	9.4	22.1	16.8	4.7	53.0
Not clear						
Sufficient	0.0	0.0	0.0	0.0	0.0	100.0
Deficient	0.0	20.0	0.0	30.0	10.0	40.0

between the two groups as regards the response, "have not secured sufficient number or quality of officials," is especially large.

There is a similar trend in the relation between "whether or not a municipality employs experienced people from other regions if it cannot find them in its own region" and the "situation regarding securing officials in charge of employment issues." That is to say, in case experienced people are employed as administrative officials from other regions, the ratio of not having secured sufficient resources either in number or quality becomes relatively low.[7]

[7] The cross tabulation between existence/nonexistence of a section that deals with job creation measures and who they think should be the principal player of creating jobs indicates that the ratio of municipalities having such a section selecting "the central government and prefectures" as the principal player was higher than that of municipalities without such a section. The cross tabulation between existence/nonexistence of a vision on job creation and who they think should be the principal player of employment also indicated the same result. (Both cases are significant at the 1% level.)

VII. Overall Picture of Regional Employment Strategy

Based on the above discussion, it can be said that having a vision or plan on employment measures would lead to planning policy on employment measures, and a section that deals with the measures is set up in order to substantiate such a vision and plan. The section then implements various employment measures. On the other hand, establishment of such a section becomes possible by the existence of human resources with specialized knowledge. The need for such human resources with specialized knowledge will enhance the need for training on the planning and implementation of employment measures. In order to have such officials, a municipality either educates them within the municipality or introduce outer resources. It is considered that introduction of outer resources will stimulate existing officials and enhance quality of human resources.

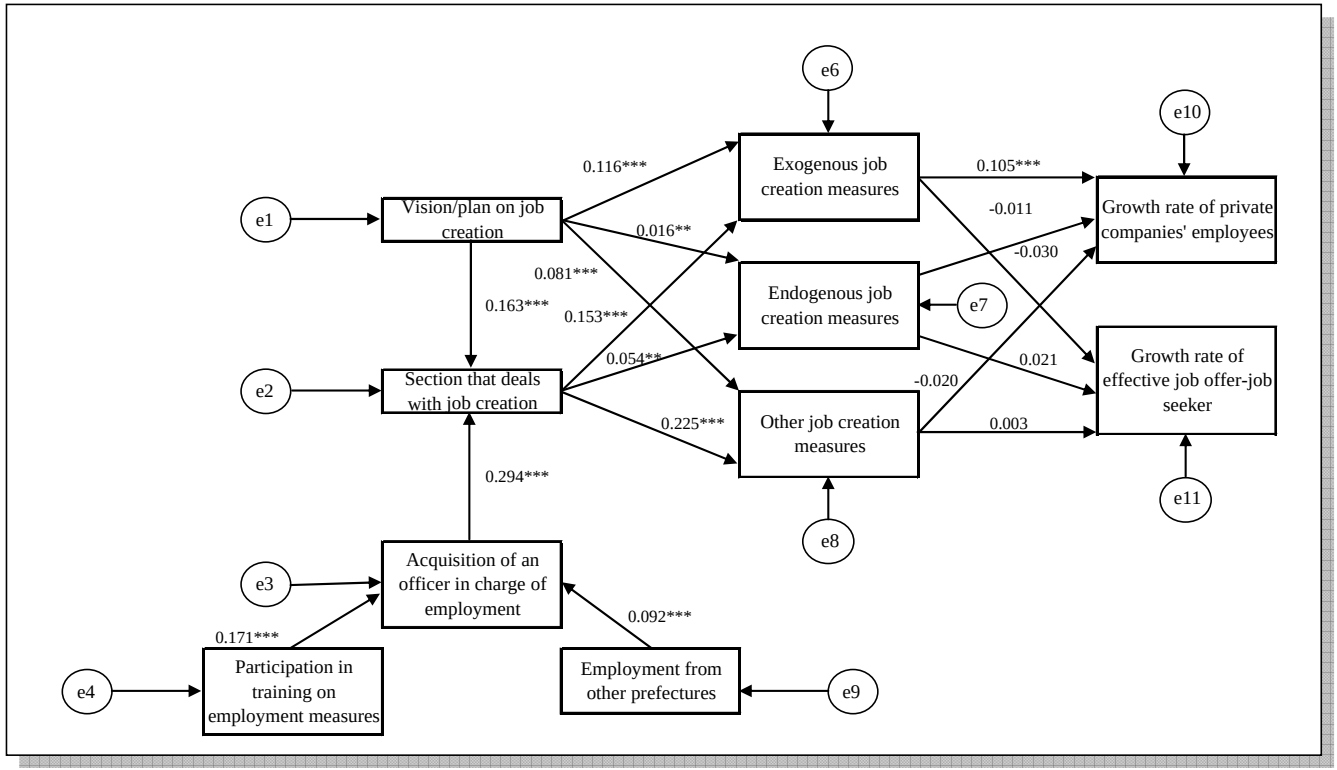
Geographical environment and economic and social factors such as population structure, industrial structure and financial situation of each municipality has a significant influence. But, the above-mentioned factors have influence as well in planning and implementing policies at municipalities. Therefore, if municipalities' role becomes larger in regional employment policy, it would become important to foster human resources (policy makers), including key persons, of municipalities.

Figure 11 is a path diagram showing the overall structure of the relation of variables based on factor analysis on implementation of employment policies (principal factor method, varimax rotation, standard of eigenvalue 1). The results of factor analysis are summarized as (i) exogenous job creation policies (company invitation and industrial park preparation, cumulative contribution rate of 14.286%), (ii) other policies (market access support, other measures, subsidies, cumulative contribution rate of 28.571%) and (iii) endogenous job creation policies (start-up support facility preparation, community business support, cumulative contribution rate of 42.852%). Then a path analysis is made setting score of each component as an explanatory variable.

The path coefficient of "nothing special" is calculated at -0.121 for existence/nonexistence of a vision or plan and -0.143 for existence/nonexistence of a section for job creation. In both cases, the coefficient is negative and significant at the 1% level. Indirect effect is 0.017.

The factor analysis excludes the item "nothing special" in order to focus on

Figure 11. Path diagram of employment creation of regions



Note: Figures are standardized coefficients, and e_i are error variable. *** is statistically significant at 1% level, ** at 5%, and * at 10%.

policy implementation. It is considered that there is a time lag for a policy impact to be realized. It should be noted therefore that there is a possibility that impact of company invitation plan implemented before 2003 has been shown in the present analysis.

It is considered that a vision or plan on job creation has an impact on implementation of measures by two routes.[8] One is the direct effect of whether or not to implement measures. Having a vision or plan leads to implementation of some kind of measures. The other route is indirect. Having a vision or plan leads to setting up a section responsible for coordinating in the actual planning and implementation of the vision or plan. By the establishment of this section, some form of job creation measures is implemented.

On the other hand, in order to set up a section that deals with employment policies, municipalities must have secured a staff to support it at the municipal level. Having a sufficient number and quality of personnel at the municipal level would enable establishment of a specific section comprised of personnel with a high level of expertise to deal with employment problems.[9]

What are the measures to secure human resources? In reality, it may not be possible to hire a lot of extra staff due to financial constraints. This paper examined two measures. One is capacity development through training and seminars on job creation, information collection and accumulation of know-how. The other is exchange of people with a high level of specialization from the outside when necessary and to hire them when possible. It takes time for a municipality to train staff on its own. Thus, in the meanwhile, municipalities can secure various types of people by hiring them from the outside and by exchanging people with outside organizations such as other prefectures. Municipalities may also be able to expand their human network through training and seminars. It seems important for municipalities to foster highly specialized human resources to deal with employment issues in the

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[8] The direct effect (β coefficient) of municipalities to undertake job creation on its own and municipalities having a clear vision or plan is 0.078 (significant at the 1% level). This relation may apply not only to job creation but also to regional promotion and town development and industrial policy.

[9] The indirect effect that preparation of a vision or plan of job creation will have on the implementation of the measures, through establishment of a section that deals with such measures, is 0.012 for exogenous job creation measures, 0.001 for endogenous measures, and 0.028 for other measures.

future.

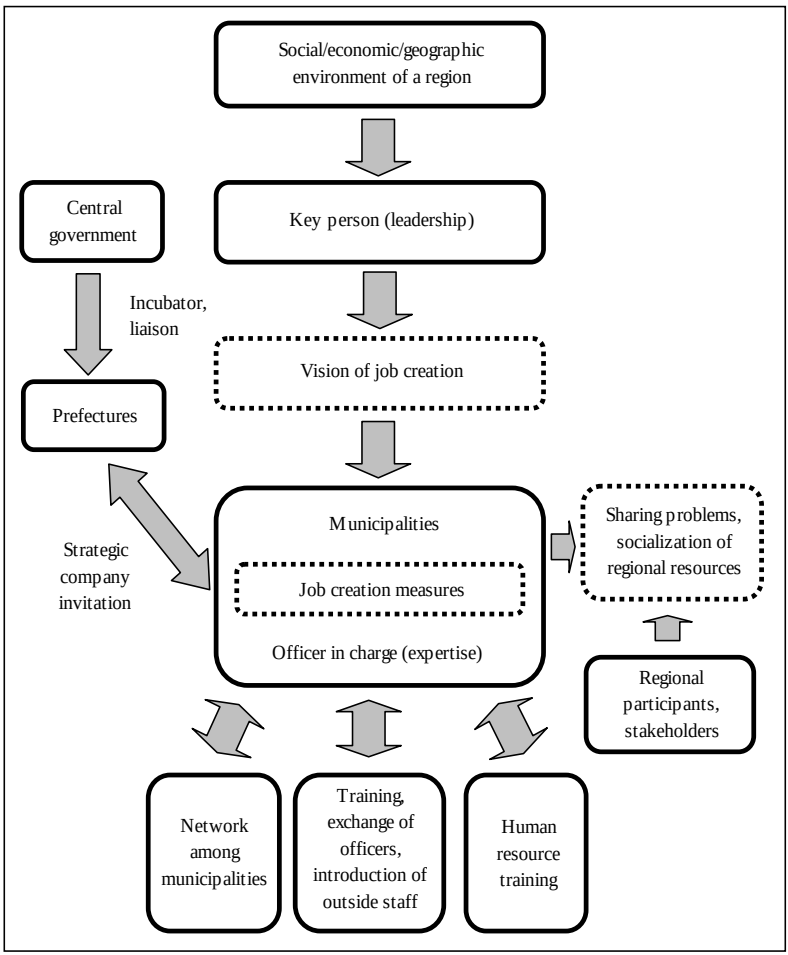
The rate of implementation of a vision or plan on job creation, the rate of implementation of the measures, and the rate of fostering human resources are all low in towns and villages compared with cities. They are not capable of dealing with employment issues at present, but not a few of them replied that they intend to look for new development through mergers with other municipalities. In fact, they have many constraints in implementing employment policies on their own, such as financial resources, population, and the number of staff. It may be necessary to collect and verify the actual cases to examine whether these cases were exceptionally successful, whether there are other similar cases, and whether the impact is temporary or sustainable.

VIII. Conclusion: Proposals on Regional Employment Strategy

The above discussions lead to the conclusion shown below. Having a vision and plan on employment measures will lead to implementation of job creation measures. A section that deals with the measures will be set up to substantiate the vision and plan on employment measures. Next, establishment of the section on the measures will be made possible by availability of staff with specialized knowledge. The need for such a staff enhances the need for training on planning and implementation of employment measures. By employing a wide range of personnel, municipalities will try to meet various needs of their personnel, which will stimulate other staff members and enhance the quality of the overall personnel. (Figure 12)

It is necessary for municipalities to have a vision on regional economy and regional employment to deal with regional job creation in the future. Municipal mayors and officials in charge of employment issues realize the importance of employment issues, but only a few municipalities have a clear vision as to what kind of a region they want to become. Prefectures have a vision and municipalities should also have one. Whether there is a local key person with leadership in drawing up a vision makes a difference. Also it would be important to train personnel responsible for policy making, including officials in charge of employment issues, in planning and implementing industrial and employment policies that make the most of regional characteristics. There is a limit to fostering generalist-type personnel, and it would be necessary to foster specialists and introduce outside personnel.

Figure 12. Overall picture of regional employment strategy



It is not realistic to expect a uniform response as the situation differs between that in major cities and other municipalities. It is necessary to divide municipalities into several groups based on their regional characteristics.

Secondly, a vision on employment is closely related to the industrial policy and regional development policy of individual municipalities. But in reality, it is not clear how industrial vision and employment vision are related. Therefore, it is important to pay attention to both the industrial vision and employment vision.

Thirdly, it is said that there is not much variety in job creation and employment measures at the municipality level.[10] Records of municipal job creation measures tell us that implemented measures do not make use of unique regional resources. Meanwhile, it is important to consider what kinds of employment measures are possible at the municipal level in spite of the constraint of shortage of staff on employment measures. It is necessary to think about securing policy makers in addition to employment measures.

Fourthly, it is said that there is a need to hire experts and specialists as policy makers. What is required is not a specialist with specialized knowledge in a limited field. It would be necessary to examine how many municipalities would be able to foster such personnel by themselves, how much they can train them, and whether and how much it is possible to utilize outside personnel under the present system.

Fifthly, it is necessary to consider a vertical network of the central government and prefectures and a horizontal network of neighboring municipalities. In dealing with regional job creation, it is necessary to examine what roles the central government, prefectures and municipalities should play in the future.

Sixthly, it is pointed out that municipalities are required to enhance the capacity of policy planning and policy formation. If we take the special zones for structural reform and regional renovation plans as examples of municipal policy planning, whether they could come up with the ideas in a short period of time was the touchstone of the municipalities' capability for planning. Up to now, prefectures and municipalities had different roles as regards policy planning and formation. But it is considered that municipalities will be expected to play the same role as prefectures in the future.

Under these circumstances, the effect of the Regional Job Creation and Promotion Program, which consists of the Regional Job Creation Back-up Program, Regional Proposal Job Creation Promotion Program, and Regional Foundation Subsidy, will gain much attention. In the questionnaire survey, it

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[10] This was also pointed out in the interview survey on municipalities. As examples of other measures that municipalities implemented, many municipalities in the questionnaire survey mentioned the Emergent Job Creation Fund Program, employment incentive, start-up seminar for job seekers and job changers, guidance, employment counseling, organization of various courses, internship and financing fund and services.

was pointed out that the know-how to substantiate visions and plans of creating job and to support municipalities that do not have sufficient information and human resources is considered as an issue for municipalities. The program is considered to function as an incubator due to the following reasons: (i) It focuses on the use of regional resources as regional communities take the initiative in dealing with job creation; (ii) a vertical network is built as the labor bureau and municipalities cooperate in the entire process from planning to implementation of the project; (iii) a horizontal network is built by several municipalities situated adjacent to each other as they undertake projects jointly; and (iv) it meets the needs of municipalities as they will be able to have access to information on cases of other regions and to other relevant information.

It will be a future task to measure the impact of the Regional Job Creation and Promotion Program. It will be necessary to examine under what conditions employment was created effectively by taking into consideration the economic and social environment of municipalities and the program content. In the future, regional leaders will be needed to plan and implement job creation measures to make the use of regional characteristics. To do this, it will be urgently required to foster regional leaders, make clear the vision (target) for regional employment strategy, and decide what policy and measures should be taken.

References

Higuchi, Yoshio. 2005. Nippon de chiiki ni yoru koyo senryaku ga hitsuyona riyu [Reasons why regional employment strategy is necessary in Japan]. In *Ciiki no koyo senryaku* [Regional employment strategy], ed. Yoshio Higuchi, Sylvain Giguère and the Japan Institute for Labour Policy and Training. Tokyo: Nippon Keizai Shinbunsha.

Higuchi, Yoshio, and Sylvain Giguèr. 2005. Keizai hatten to koyo soshutsu suru tameno chiiki gabanansu [Regional governance for economic development and job creation]. In *Ciiki no koyo senryaku* [Regional employment strategy], ed. Yoshio Higuchi, Sylvain Giguère and the Japan Institute for Labour Policy and Training. Tokyo: Nippon Keizai Shinbunsha.

Inatsugu, Hiroaki. 2006. *Jichitai no jinji shisutemu kaikaku* [Personnel system reform in local government]. Tokyo: Gyosei.

Ito, Mihoru. 2005. Soron [General statement]. In Shitsugyo, Shushoku no Chiiki Kozo

Bunseki ni kansuru Makuro Deta ni yoru Kenkyu [A study using macro data with respect to analyses on regional structure of unemployment and employment], JILPT Research Report, No. 31. Tokyo: The Japan Institute for Labour Policy and Training.

Ito, Minoru, and Kazufumi Yugami. 2005. Nippon ni okeru chiiki koyo seisaku no hensen to genjo [Transition and present situation of Japanese regional employment policy]. In *Ciiki no koyo senryaku* [Regional employment strategy], ed. Yoshio Higuchi, Sylvain Giguère and the Japan Institute for Labour Policy and Training. Tokyo: Nippon Keizai Shinbunsha.

The Japan Institute of Labour, ed. 1997. Fukyo Chiiki no Kozo Tenkan [Structural change of regions in recession], JIL Research Report, no. 85. Tokyo: The Japan Institute of Labour.

Nakamura, Keisuke. 2004. *Kawaru no ha ima* [It's now to change]. Tokyo: Gyosei.

Nippon OMNI-Management Association. 2004. Jinzai Hakusho [White paper on human resources]. Tokyo: NOMA.

Saguchi, Kazuro. 2004. Chiiki koyo seisaku to ha nani ka: Sono hitsuyosei to kanosei [What is regional employment policy?: Needs and possibility]. In *Jiritsu shita chiiki keizai no dezain: Seisan to seikatsu no kokyo kukan* [Design of independent regional economy: Public space for production and living], ed. Naohiko Jinno, Akira Morita, Takashi Onishi, Kazuhiro Ueda, Takehiko Kariya and Mari Osawa. Tokyo: Yuhikaku.

———. 2006. Chiiki koyo seisaku no tenkai to kadai [Development and problems of regional employment policy]. *Chiiki Seisaku Kenkyu* [Regional policy research], no. 34:28-39.

Suzuki, Shigeru. 2004. Chiiki sangyo tenkan wo sasaeru kokyo bumon no yakuwari [Role of public section to support regional industrial transition]. In *Jiritsu shita chiiki keizai no dezain: Seisan to seikatsu no kokyo kukan* [Design of independent regional economy: Public space for production and living], ed. Naohiko Jinno, Akira Morita, Takashi Onishi, Kazuhiro Ueda, Takehiko Kariya and Mari Osawa. Tokyo: Yuhikaku.

JILPT Research Activities

Research Report

The findings of research activities undertaken by the Japan Institute for Labour Policy and Training (JILPT) are compiled into Research Reports (in Japanese). Below is a list of the reports published from August to November 2007. The complete text in Japanese of these reports can be accessed from the JILPT website. We are currently working on uploading abstracts of the reports in English onto the JILPT website as well.

No. 88 *Social Functions of Voluntary Norms in Foreign Countries and the Effect of the Voluntary Norms on the Investment Behaviors of Companies, etc.* (September 2007)

No. 89 *Research on Strategy Issues of Urban Employment and Urban Functions* (September 2007)

No. 90 *Labor-management Communication and Determination of Working Conditions in Small- and Medium-Sized Enterprises* (October 2007)

No. 91 *Research on Counseling Techniques for Job Placement* (October 2007)

No. 92 *Parents' Perceptions about the Future Career Education and Guidance of Their Children* (October 2007)

No. 93 *Municipalities' Response to Employment Issues: The Framework of Regional Employment Creation and Issues* (October 2007)

No. 94 *Business and Personnel Management and Labor-management Communication in the Process of Business Recovery* (November 2007)

Northeast Labour Forum

On November 6, 2007, JILPT cosponsored, with the Chinese Academy of Labour and Social Security (CALSS) and the Korea Labor Institute (KLI), the 6th Northeast Asia Labour Forum in Tokyo. The three labor institutes hold a forum once every year with a common theme and present their research results, aiming at promoting mutual understanding among the three countries and raising the standard of research. The latest forum focused on the theme, *Constructing the Vigorous Ageing Society: Present Situation and Agenda of Employment Policy for Elder People.* The research papers presented by the

three parties at the forum are shown below. The papers (in full text) are available on the website of the JILPT.

JILPT

Minoru Ito, Research Director, *Policies and Actual Conditions on Employment of Older Persons in Japan*

Makoto Fujimoto, Researcher, *Conditions for the Continuous Employment Framework to Function toward Promotion of Employment of Older Persons*

Korea

Injae Lee, Senior Research Fellow, KLI, *Factors Determining Recruitment of Older Persons in Korea*

Jiyeun Chang, Senior Research Fellow, KLI, *Income Levels and Sources of Older Persons in Korea: From the Results of the Panel Study on Ageing*

China

Xuanbo Zheng, Deputy Division Director, Department of Employment and Training, Ministry of Labour and Social Security, China, *Employment of Older Persons and Related Policies in China*

Jiaqiang Liu, Professor of Southwest University of Finance and Economics, China, *Human Resource Development of Older Persons in China Where Ageing Is Accelerating*

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