

# The Current Situation and Future Problems of Employment in the Disaster Area

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## I. Overview of Employment in the Six Prefectures of Tohoku

Based on the jobs-to-applicants ratio in the six prefectures of Tohoku, the employment situation in the three prefectures affected by the tsunami and nuclear power accident (Miyagi, Iwate and Fukushima) changed dramatically between six months after the disaster (as of October 2011) and eighteen months after the disaster (as of October 2012). At the six-month point, employment in coastal areas most damaged by the tsunami was characterized by a “shortage of jobs” for local residents looking for work, owing to a mismatch of working locations, occupations, etc. At the eighteen-month point, however, this had changed to a “shortage of labor”, whereby local companies could not hire the human resources they wanted in the disaster-affected area.

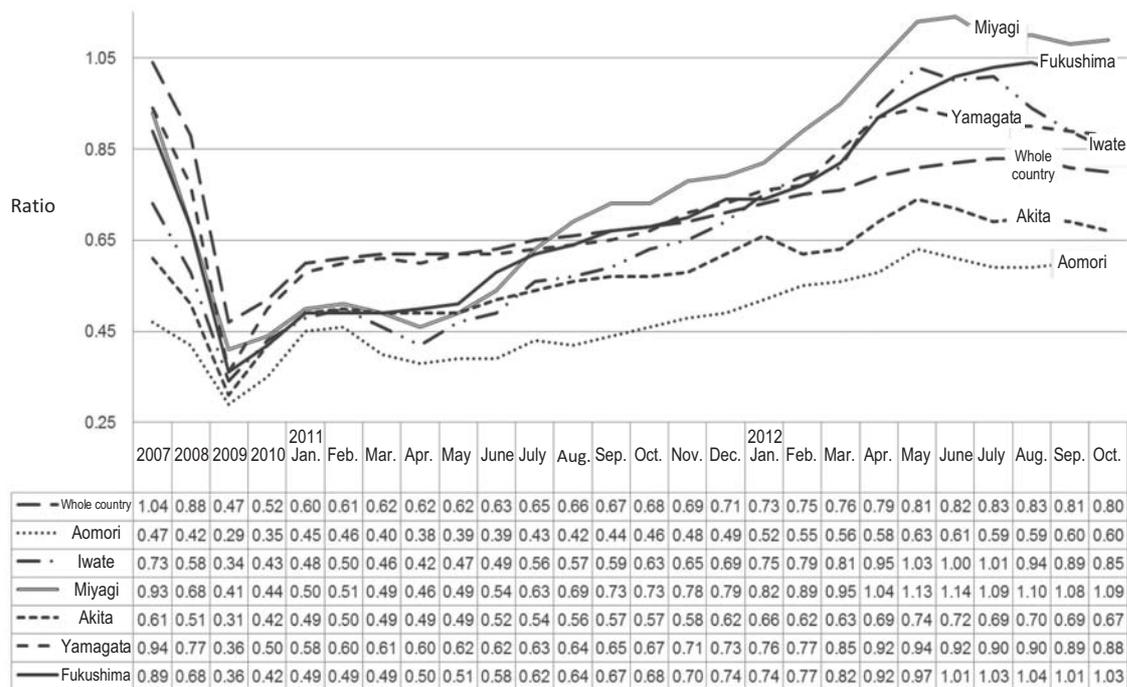
Although this situation was temporarily boosted by reconstruction demand in the construction industry and elsewhere, the long-term prospects for problems of the employment structure in Tohoku seem by no means rosy. In this section, the situation of employment in the three disaster-affected prefectures (particularly Miyagi Prefecture) will be analyzed in detail.

### 1.1. Trends in the jobs-to-applicants ratio in the six prefectures of Tohoku

In the three disaster-affected prefectures, the jobs-to-applicants ratio started to rise rapidly from around June 2011, until it passed 1.0 in Miyagi Prefecture in April 2012 and in all three prefectures by June of that year. In Aomori and Akita Prefecture, by contrast, the ratio has remained below the national average after the disaster.

As of October 2012, the three disaster-affected prefectures of Miyagi, Fukushima and Iwate (among others) faced a severe problem of local labor shortages, on a par with the situation before the Lehman Shock of 2008. However, one should hesitate to judge the employment situation optimistically, based only on quantitative relationships between job openings and job seekers. It is vital that detailed analysis be conducted on differences between coastal and inland areas, types of jobs available in each, and so on.

In Aomori and Akita Prefectures, on the other hand, there are fewer local job openings, and job seekers looking for work locally are still having difficulty in finding employment. This employment situation is thought to manifest the problem of structural shrinkage in employment opportunities inherent to Tohoku since before the disaster.

**Fig. 1: Trends in the jobs-to-applicants ratio in the six prefectures of Tohoku**

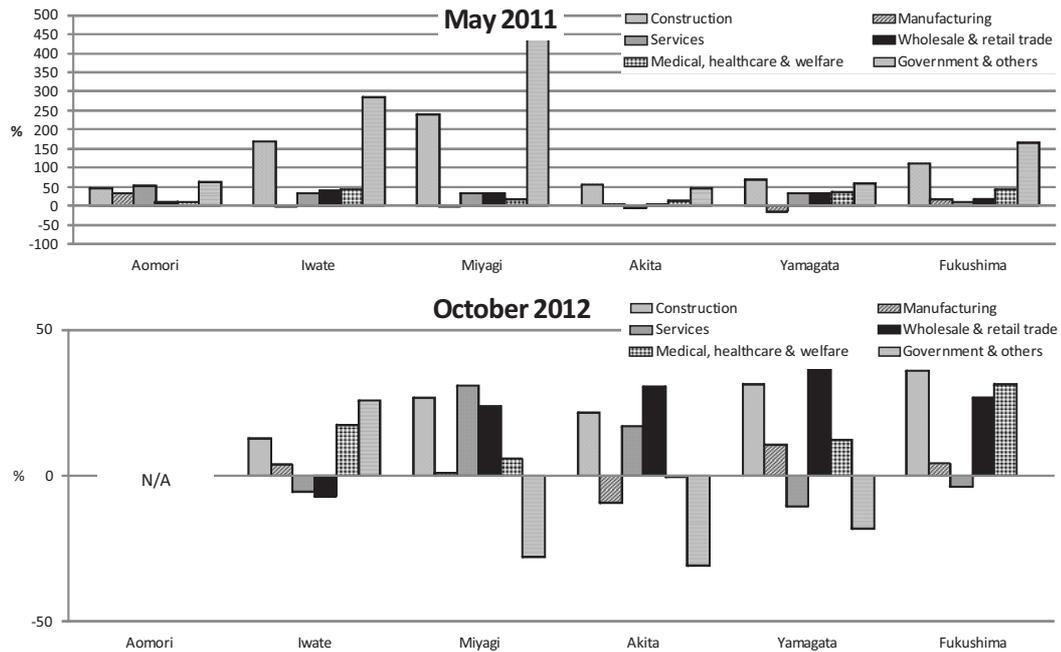
\* Jobs-to-applicants ratio (seasonally adjusted) (excluding new graduates, including part-timers) (Annual averages are original figures) (Source) Compiled from Employment Referrals for General Workers, Ministry of Health, Labour and Welfare (long-term time series tables up to October 2012: <http://mhlw.go.jp/stf/houdou/2r9852000002pf1g.html>; obtained on Dec. 1, 2012).

## 1.2. Change in new openings in the six prefectures of Tohoku, by industry

The year-on-year change in new job openings in the six prefectures of Tohoku by industry will now be compared between a point soon after the disaster (May 2011) and eighteen months afterwards (October 2012) (figures for Aomori Prefecture are unknown, as no data were published).

Immediately after the disaster, jobs in public services increased most sharply, mainly in the three disaster-affected prefectures, due to increased allocations as a temporary employment measure (e.g. temporary employment of security guards). New hiring in the construction sector increased the next most rapidly. Eighteen months after the disaster, however, temporary employment and other public service openings in the three disaster-affected prefectures had decreased sharply. Nevertheless, new openings in the construction sector immediately after the disaster still remained brisk, and this had a wave effect on the non-affected prefectures of Yamagata and Akita. New job openings in the manufacturing sector increased most notably in Yamagata and only slightly in Fukushima and Iwate, but turned to a decline in Akita Prefecture. New job openings in services showed the highest growth rate in Miyagi and also grew in Akita, but a decreasing trend was noted in Yamagata, Iwate and Fukushima Prefectures.

**Fig. 2: Year-on-year change in new job openings in the six prefectures of Tohoku, by industry (comparison between May 2011 and October 2012)**



(Source) Compiled from statistical data published by Regional Labour Bureaus of the six Tohoku prefectures.

## II. The Employment Situation in Miyagi Prefecture

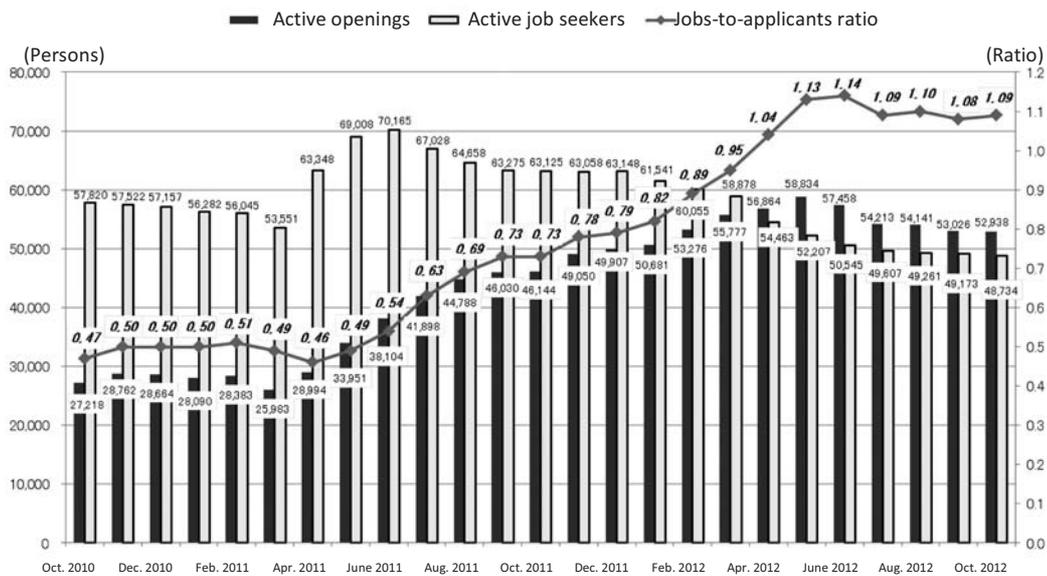
### 2.1. Trends in active openings and active job seekers in Miyagi Prefecture

There were around 56,000 active job seekers in Miyagi Prefecture up to just before the disaster in February 2011, but this started to increase sharply immediately after the disaster on March 11th that year, peaking at around 70,000 three months later in June. Thereafter, the number of active job seekers turned to a decrease, falling to 48,000 (less than just before the disaster) in October 2012.

Conversely, the number of active openings in Miyagi Prefecture continued to grow rapidly from immediately after the disaster, reaching nearly 59,000 fourteen months later in May 2012. Thereafter, the number of active openings continued to decrease gradually, and stood at around 53,000 as of October 2012.

As a result, the jobs-to-applicants ratio temporarily slumped to 0.46 in April 2011 after the disaster, but then continued to rise, peaking at 1.14 in June 2012, fifteen months after the disaster. It remained at a high level thereafter, standing at 1.09 (the 3rd highest in Japan) as of October that year. In other words, the state of labor shortage (i.e. more job openings than job seekers looking for work) in Miyagi Prefecture as a whole continued for a while from April 2012, about a year after the disaster.

**Fig. 3: Trends in active openings, active job seekers and the jobs-to-applicants ratio in Miyagi Prefecture**



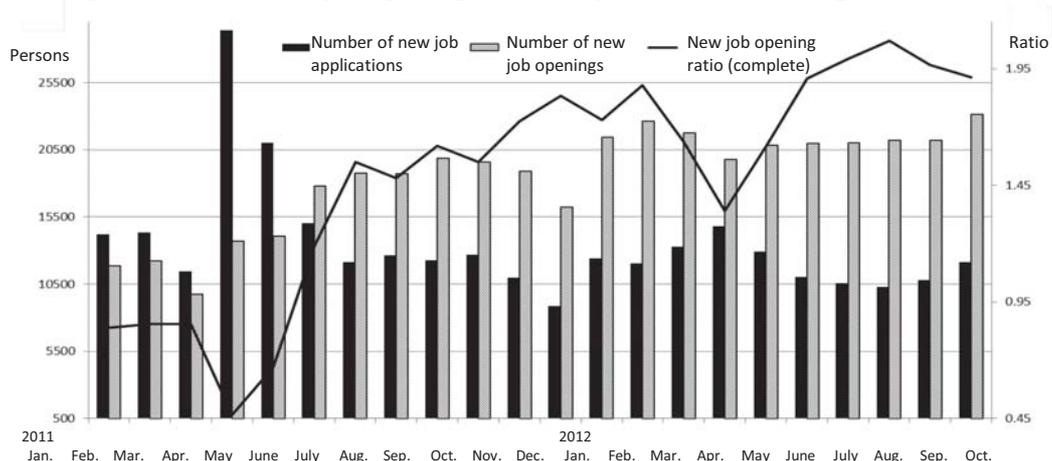
Note: Figures for active openings, active job seekers and the jobs-to-applicants ratio are seasonally adjusted. (Source) Reproduced from Miyagi Regional Labour Bureau data.

## 2.2. Trends in new job openings and new job seekers in Miyagi Prefecture

Next, trends in new job openings and new job seekers in Miyagi Prefecture will be examined. In June 2011, three months after the disaster, the number of new job seekers returned to its level just before the disaster. On the other hand, new job openings increased sharply from immediately after the disaster and continued to exceed new job seekers for a while from June 2011, three months later. The difference between the two was nearly double as of October 2012.

In other words, since June 2011, three months after the disaster, the number of openings newly offered by companies seeking staff has continued to increase at a faster pace than the number of people newly looking for work.

**Fig. 4: Trends in new job openings and new job seekers in Miyagi Prefecture**



(Source) Compiled from "Employment Referrals for General Workers in Miyagi Prefecture (as of Oct. 2012)" published by the Miyagi Regional Labour Bureau <http://miyagi-roudoukyoku.isite.mhlw.go.jp/library/miyagi-roudoukyoku/syokugyoushoukai/2410shokugyoushoukai.pdf> (obtained on Dec. 6, 2012).

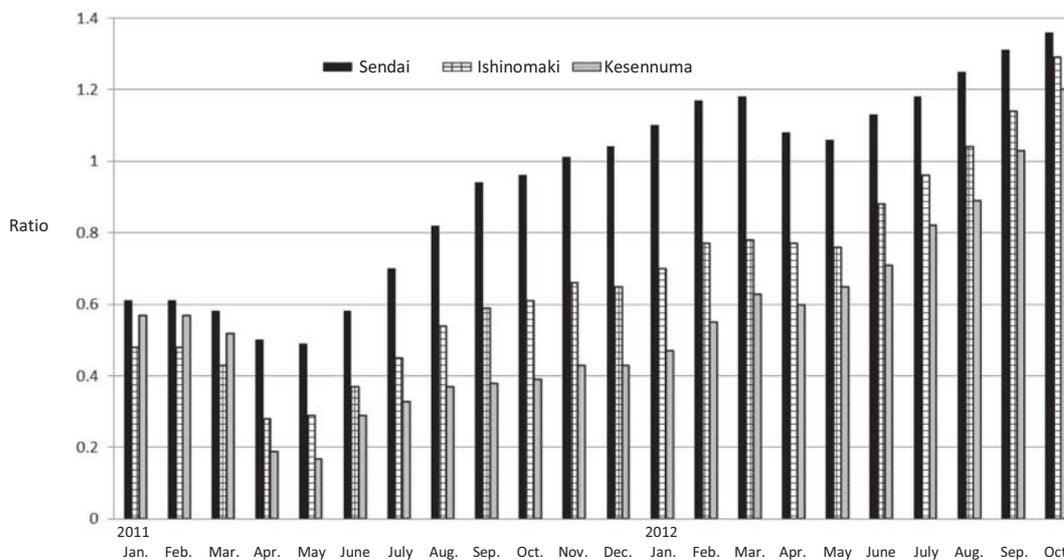
### 2.3. Jobs-to-applicants ratio by region of Miyagi Prefecture (coastal and inland areas)

The disparity between the jobs-to-applicants ratio in Ishinomaki, Kesennuma and other coastal areas compared to Sendai and other inland areas of Miyagi Prefecture, all of which were affected by the tsunami disaster, started to widen immediately after the disaster. The difference between Sendai and Kesennuma peaked at 0.63 points in January 2012, ten months after the disaster, then gradually falling back thereafter.

In Miyagi Prefecture, the jobs-to-applicants ratio started to rise sharply in Sendai and other inland areas immediately after the disaster, leading to an ongoing labor shortage. On the other hand, in Ishinomaki and Kesennuma, however, the growth in job openings was slower than in inland areas. As a result, for about a year after the disaster, a pronounced disparity in the jobs-to-applicants ratio arose between inland and coastal areas.

Thanks to the gradual progress of reconstruction in coastal areas, however, the ratio reached 1.29 in Ishinomaki and 1.20 in Kesennuma eighteen months after the disaster (in October 2012). This reveals severe labor shortages at local level, not just in Sendai and other inland areas but also in coastal areas like Ishinomaki and Kesennuma. This state of labor shortage is thought highly likely to delay the reconstruction of the tsunami-affected areas.

**Fig. 5: Trends in the jobs-to-applicants ratio in coastal and inland areas of Miyagi Prefecture**



(Source) Compiled from "Employment Referrals for General Workers in Miyagi Prefecture (as of Oct. 2012)" published by the Miyagi Regional Labour Bureau <http://miyagi-roudoukyoku.site.mhlw.go.jp/library/miyagi-roudoukyoku/syokugyoushoukai/2410shokugyoushoukai.pdf> (obtained on Dec. 6, 2012).

### 2.4. Situations of job openings and job seekers in coastal areas of Miyagi Prefecture, by industry

Now let us examine causes of labor shortages in Ishinomaki, Kesennuma and other coastal areas of Miyagi Prefecture.

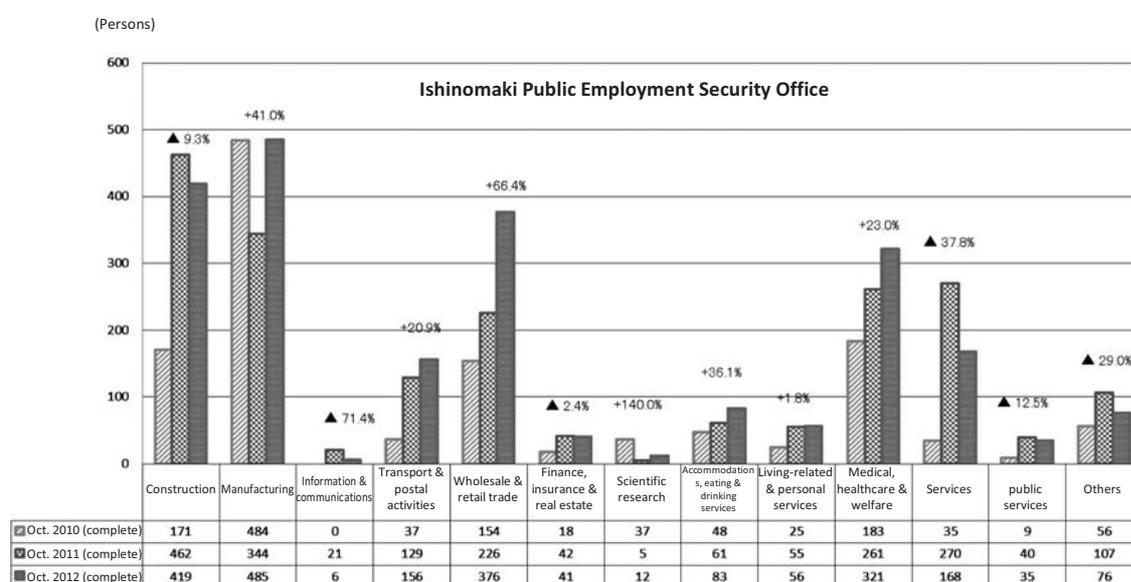
- (1) Trends in new job openings in coastal areas of Miyagi Prefecture, by industry  
The number of new job openings by industry will now be compared between three

points in time, namely before the disaster in October 2010, six months after the disaster in October 2011, and eighteen months after the disaster in October 2012.

In Ishinomaki, sectors in which new job openings had increased markedly year-on-year as of six months after the disaster (October 2011), in descending order of the number of openings, were “construction”, “services”, “medical, healthcare & welfare”, “wholesale & retail trade”, and “transport & postal activities”, among others. Conversely, openings had decreased sharply in “manufacturing (including marine product processing)”.

Next, sectors in which openings had increased markedly year-on-year as of eighteen months after the disaster (October 2012), in descending order, were “manufacturing (including marine product processing)” (rate of increase 41.0%), “wholesale & retail trade” (66.4%), and “medical, healthcare & welfare” (23.0%), among others. On the other hand, decreasing trends were seen in “construction” and “services”.

**Fig. 6: Situation of new job openings in Ishinomaki, by industry**

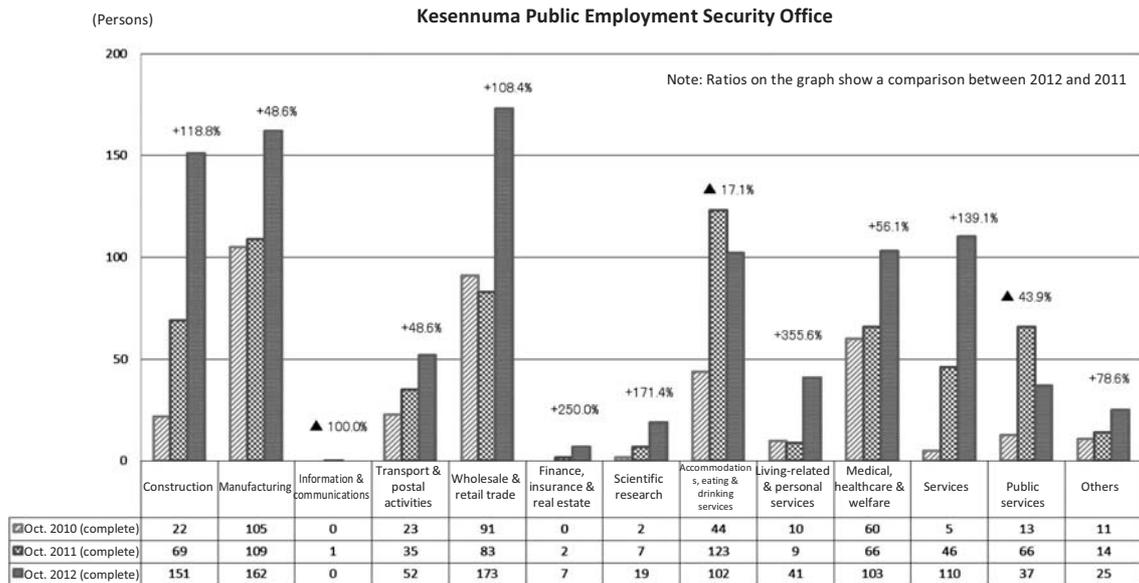


Note: Ratios on the graph show a comparison between 2012 and 2011.  
(Source) Reproduced from Miyagi Regional Labour Bureau data.

In Kesennuma, sectors in which new job openings had increased markedly year-on-year as of six months after the disaster (October 2011), in descending order of the number of openings, were “accommodations, eating & drinking services”, “construction”, and “public services” (e.g. temporary employment of security guards), among others. Conversely, new job openings had decreased in “wholesale & retail trade”, among others.

Next, sectors in which openings had increased markedly year-on-year as of eighteen months after the disaster (October 2012), in descending order, were “wholesale & retail trade” (rate of increase 108.4%), “manufacturing (including marine product processing)” (48.6%), “construction” (118.8%), “services” (139.1%), “medical, healthcare & welfare” (56.1%), “transport and postal activities” (48.6%), and “living-related & personal services” (355.6%), among others. On the other hand, decreasing trends were seen in “accommodations, eating & drinking services” and “public services”.

**Fig. 7: Situation of new job openings in Kesennuma, by industry**



(Source) Reproduced from Miyagi Regional Labour Bureau data.

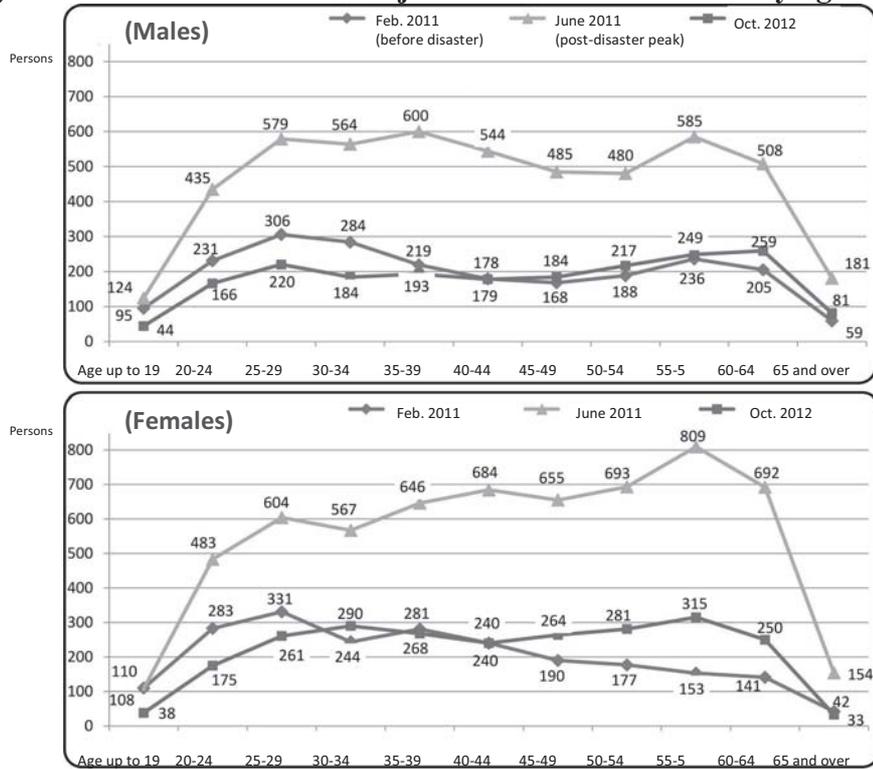
(2) Trends in numbers of job seekers in coastal areas of Miyagi Prefecture

Next, let us examine trends in numbers of job seekers in Ishinomaki, Kesennuma and other coastal areas of Miyagi Prefecture. The number of job seekers will be compared between three points in time, namely before the disaster in February 2011, three months after the disaster in June 2011, and eighteen months after the disaster in October 2012.

In Ishinomaki and Kesennuma, job seekers were most numerous three months after the disaster in June 2011, when females in their latter 50s accounted for the largest proportion. As of October 2012, however, numbers overall had almost returned to the situation just before the disaster.

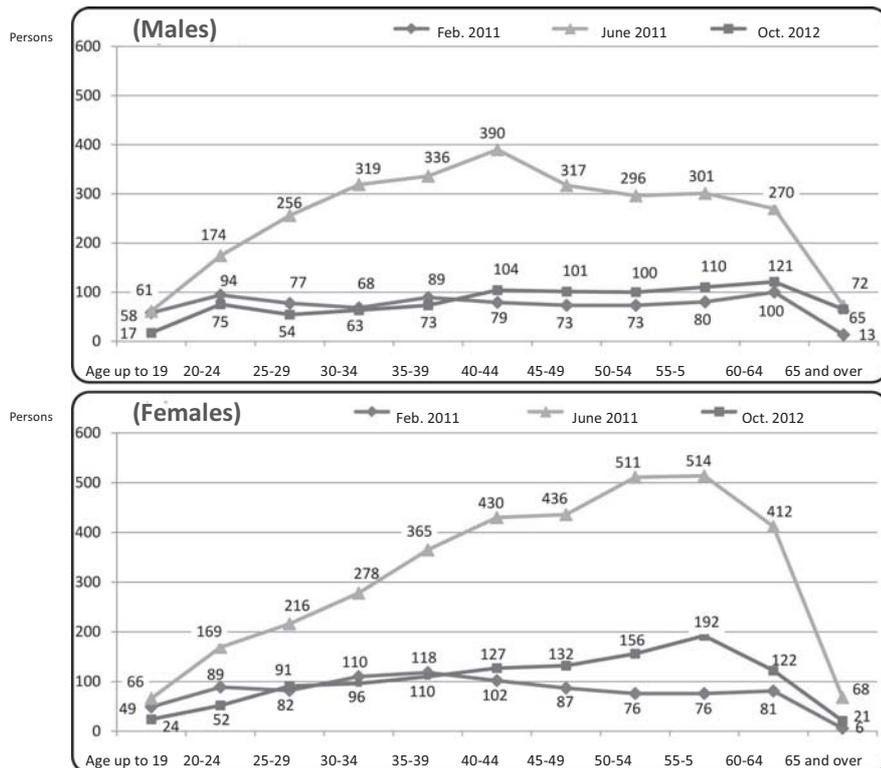
Looking more closely at the detail, we find that job seekers in younger age brackets up to the 30s were slightly fewer in number than before the disaster. In Kesennuma, particularly, the number peaked with females in their latter 50s, and job seekers among middle-aged and older females aged 40 and above remained high at 2-2.5 times the number before the disaster.

**Fig. 8: Trends in the number of job seekers in Ishinomaki by age and gender**



(Source) Reproduced from Miyagi Regional Labour Bureau data.

**Fig. 9: Trends in the number of job seekers in Kesennuma by age and gender**



(Source) Reproduced from Miyagi Regional Labour Bureau data.

(3) Situation of sector mismatches by occupation in coastal areas of Miyagi Prefecture

The situation of mismatches by occupation becomes apparent when we compare the numbers of openings and job seekers in sectors where openings had increased as of October 2012, namely “food manufacturing (including marine product processing)” and “construction & mining”. A characteristic in terms of gender is that females accounted for a very large proportion of job seekers wishing to work in “food manufacturing (including marine product processing)”, while the overwhelming majority of those looking for work in sectors like civil engineering and construction were male.

In Ishinomaki, the number of openings vastly outweighed the number of job seekers in both “food manufacturing (including marine product processing)” and “construction & mining”. As a result, the local labor shortage is thought to have increased in severity. In Kesenuma, conversely, job seekers slightly outnumbered openings in food manufacturing, but in construction & mining, the number of job seekers was only about 60% of the number of openings.

**Fig. 10: Situation of mismatches by occupation in Ishinomaki and Kesenuma (as of October 2012)**



Note: Jobs in construction & mining are jobs in construction, electrical works, civil engineering, etc.  
 (Source) Reproduced from Miyagi Regional Labour Bureau data.

Facts clarified by the above statistical data are that, in Ishinomaki, Kesenuma and other coastal areas of Miyagi Prefecture, the number of job seekers aged below 40 had slightly decreased as of eighteen months after the disaster (in October 2012) compared to before the disaster, but that the number of openings had continued to rise markedly compared to before the disaster. This is thought to have created a situation in which it was difficult to secure human resources. However, among middle-aged and older females aged 40 and above in Kesenuma and elsewhere, the number of job seekers looking for work locally remained at a higher level than before the disaster.

Meanwhile, construction-related projects supporting infrastructure reconstruction in coastal areas have suffered from chronic labor shortages since immediately after the disaster. Furthermore, the reconstruction of marine product processing & other food manufacturing (the principal industry in coastal areas) has caused a sharp increase in new job openings. This has given rise to severe problems of labor shortage in Ishinomaki and elsewhere, and this is highly likely to be hindering the reconstruction of local industry.

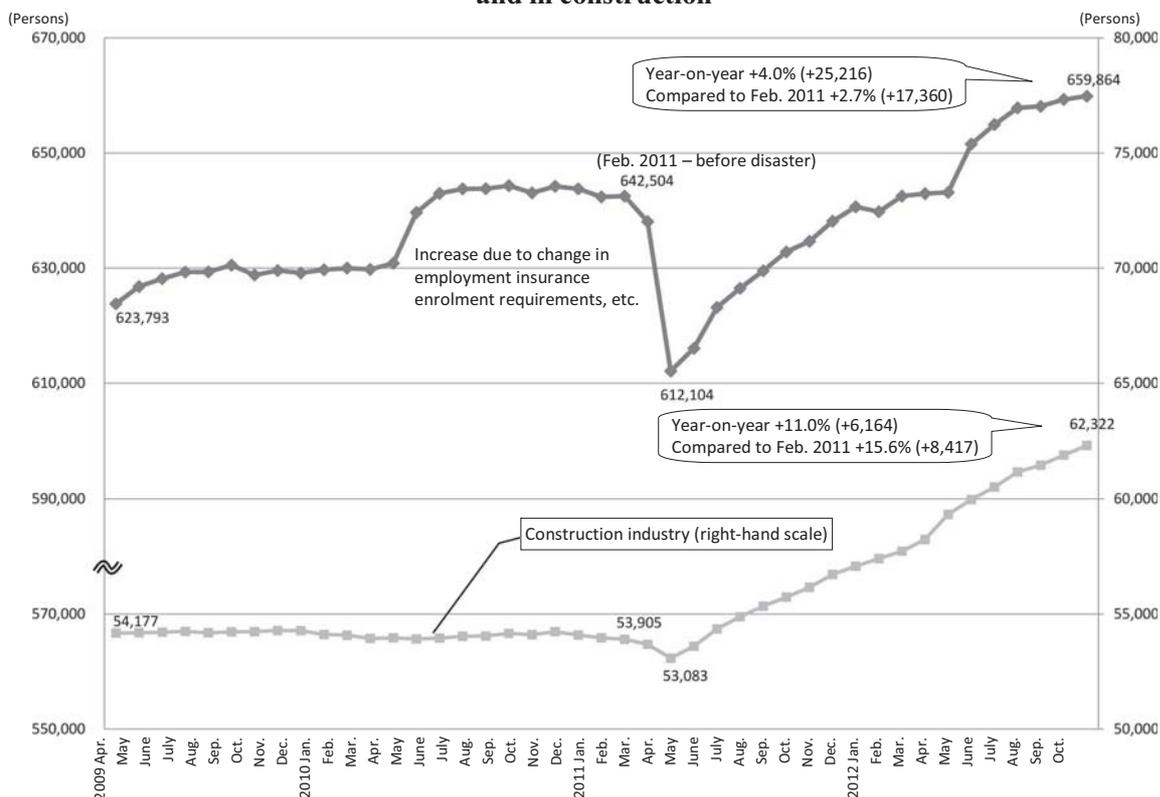
## 2.5. Changes in the employment structure of Miyagi Prefecture

Now let us examine how the employment structure in Miyagi Prefecture has changed. We can see the changes in the employment structure by analyzing data on workers enrolled in employment insurance (except the self-employed, business owners and others in agriculture, forestry, fisheries, commercial business, etc.).

In Miyagi Prefecture as a whole, there were more workers enrolled in employment insurance about one year after the disaster in Feb. 2012 than there had been before the disaster. As of October, moreover, these had increased by 17,360 individuals compared to just before the disaster in Feb. 2011. In a breakdown of this increase by sector, construction accounted for 8,417 individuals (48%).

In other words, this means that in Miyagi Prefecture as a whole, about half of the increase in employment after the disaster consisted of workers engaged in construction-related jobs.

**Fig. 11: Trends in workers enrolled in employment insurance in Miyagi Prefecture as a whole and in construction**

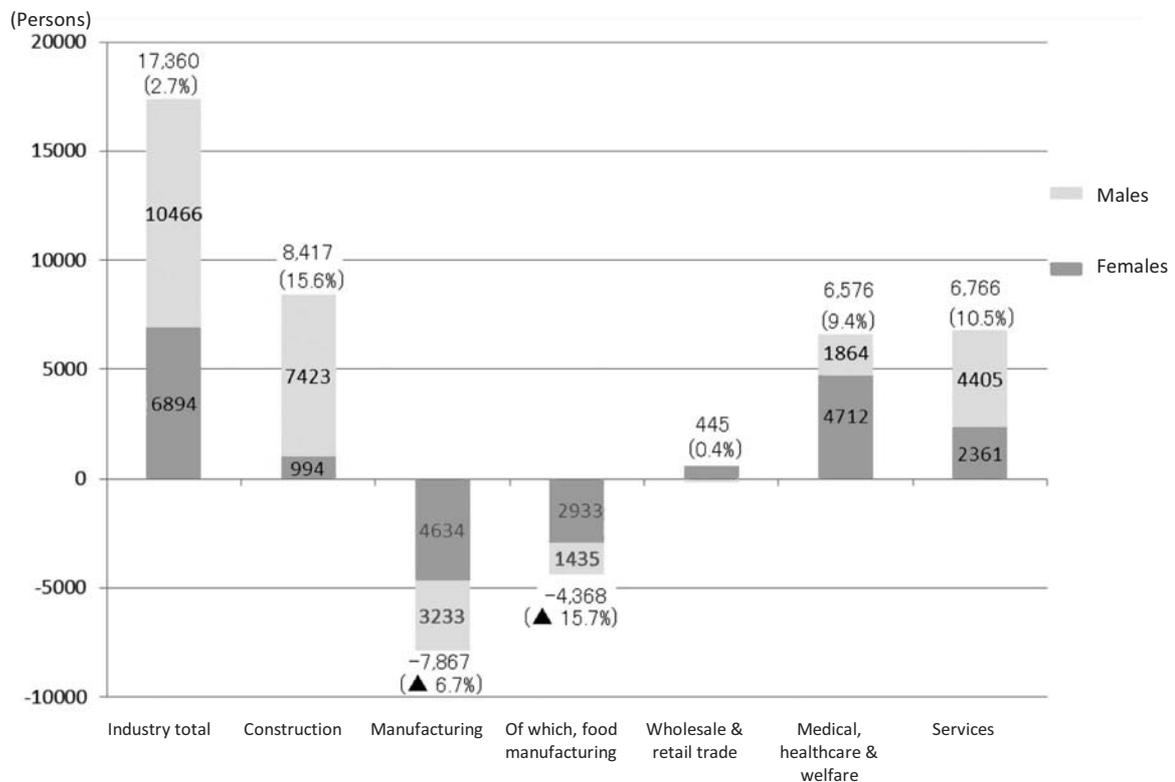


(Source) Reproduced from Miyagi Regional Labour Bureau data.

Comparing the number of workers enrolled in employment insurance just before the disaster (February 2011) and eighteen months after the disaster (October 2012), the largest increases besides “construction” (8,417) were in “services” (6,766) and “medical, healthcare & welfare” (6,576). Conversely, a decrease of 7,867 was seen in “manufacturing (including food manufacturing)”.

In other words, the sector seeing the largest increase in employees in Miyagi Prefecture since the disaster is construction, followed by services, medical, healthcare & welfare and others, showing significant increases. On the other hand, workers in manufacturing industries have decreased markedly.

**Fig. 12: Change in number of workers enrolled in employment insurance in Miyagi Prefecture, by industry (comparison between Feb. 2011 and Oct. 2012)**



(Source) Reproduced from Miyagi Regional Labour Bureau data.

Now, let us examine in more detail trends in the number of workers enrolled in employment insurance in Ishinomaki, Kesenuma and other coastal areas.

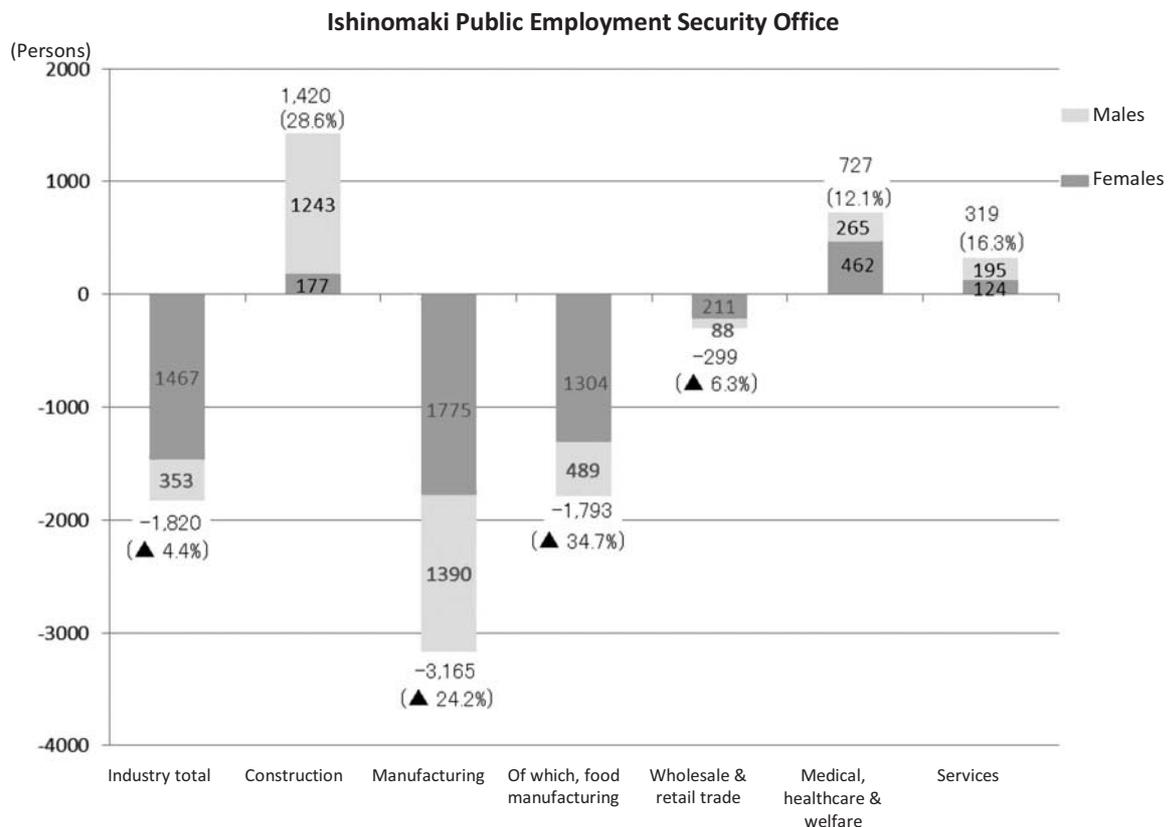
(1) Change in number of workers enrolled in employment insurance in Ishinomaki, by industry

In Ishinomaki, the decrease in number of workers enrolled in employment insurance as of eighteen months after the disaster (October 2012) was a total of 1,820 compared to just before the disaster (February 2011). In particular, the number decreased by 1,793 in marine product processing & other food manufacturing, and by 3,165 in manufacturing as a whole (including shipbuilding and others), while the number increased by 1,420 in construction, 727

in medical, healthcare & welfare, and 319 in services.

This indicates that workers engaged in construction, medical, healthcare & welfare and other sectors increased in Ishinomaki, but because workers in manufacturing industries such as marine product processing & other food manufacturing decreased more markedly, the total number of persons in employment has fallen by at least 1,820.

**Fig. 13: Change in number of workers enrolled in employment insurance in Ishinomaki, by industry (comparison between Feb. 2011 and Oct. 2012)**



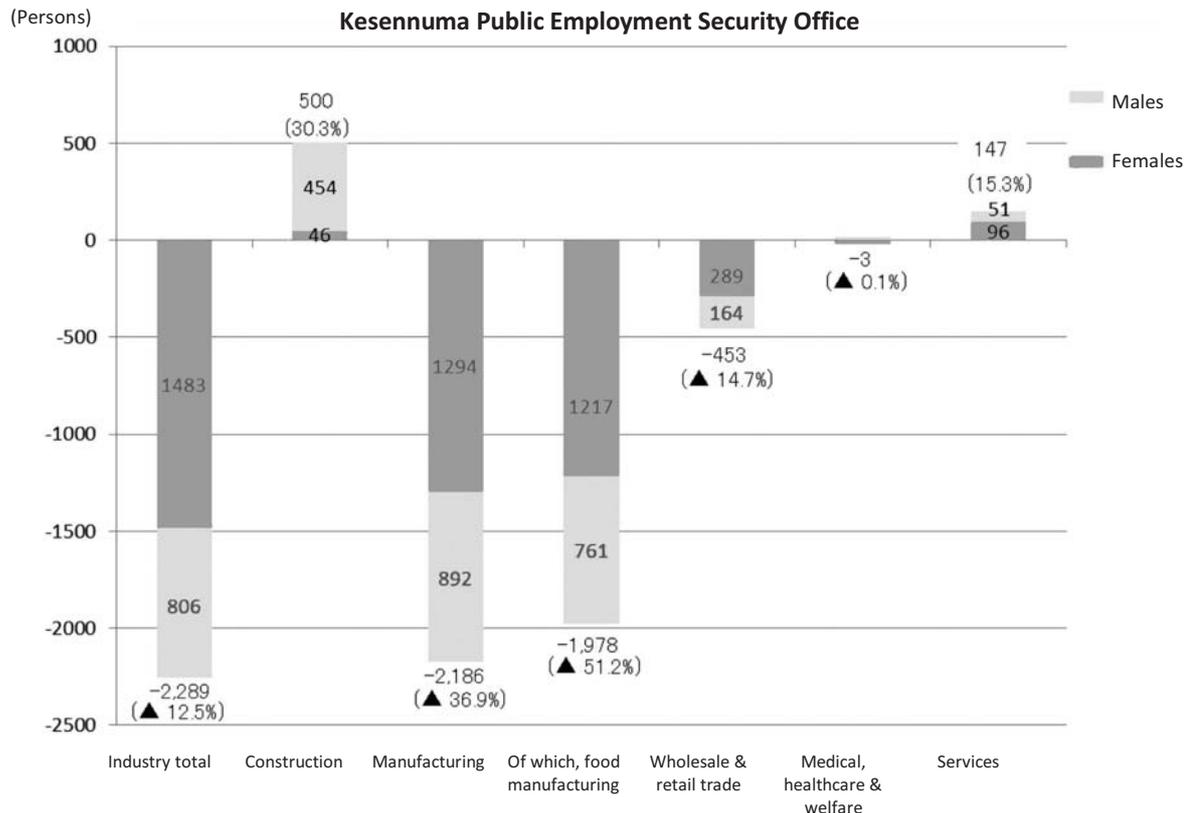
(Source) Reproduced from Miyagi Regional Labour Bureau data.

(2) Change in number of workers enrolled in employment insurance in Kesennuma, by industry

In Kesennuma as a whole, there were 2,289 fewer workers enrolled in employment insurance as of eighteen months after the disaster (October 2012) than just before the disaster (February 2011). In particular, the number working in marine product processing & other food manufacturing decreased by as many as 1,978, accounting for 86% of the overall decrease in Kesennuma, while the number only increased by 500 in construction and 147 in services.

This indicates that workers in construction and other sectors also increased in Kesennuma, but the decrease in the number of workers in manufacturing industries such as marine product processing & other food manufacturing exceeded the above increase, the total number of persons in employment has fallen by at least 2,289.

**Fig. 14: Change in number of workers enrolled in employment insurance in Kesennuma, by industry (comparison between Feb. 2011 and Oct. 2012)**



Facts clarified by the above statistical data are that, in Miyagi Prefecture as a whole, the number of people engaged in construction-related jobs increased significantly, but that in Ishinomaki, Kesennuma and other coastal areas affected by the tsunami, the number of persons employed in the principal industry of marine product processing & other food manufacturing decreased significantly compared to before the disaster.

Cross-checking with previous analysis results reveals that, in Miyagi Prefecture as a whole (including Ishinomaki, Kesennuma and other coastal areas), there was an ongoing labor shortage caused by an unprecedented loss of manpower as of October 2012. Some workers who lost their jobs but remained in Ishinomaki, Kesennuma and other coastal areas have been re-employed in construction-related industries (mainly males), but middle-aged and older females aged 40 and over are finding it as difficult as ever to find work. Even though more companies are gradually rebuilding marine product processing and other food manufacturing business, the principal industry of coastal areas, and the number of openings has increased, the number of job seekers at local level has decreased.

The main conceivable causes of this are thought to be, firstly, that some unemployed workers aged below 40 moved away from coastal areas after the disaster, and secondly, that many elderly workers who remained in their local areas even after the disaster gave up hope of re-employment after the extension of unemployment benefits had ended.

In Kesennuma and elsewhere, there are reports that middle-aged and older female employees previously employed by local marine product processing companies, on losing

their jobs when their companies were affected by the disaster, were often reluctant to work for other companies out of consideration for close-knit human relations in their locality. Others suggest that young people tend to shun many marine product processing jobs that generally involve slicing fish and other seafood, because the wages are too low and the working environment is poor, due to the smell, etc. These circumstances are also thought to make it more difficult to hire the human resources needed to reconstruct marine product processing & other food manufacturing.

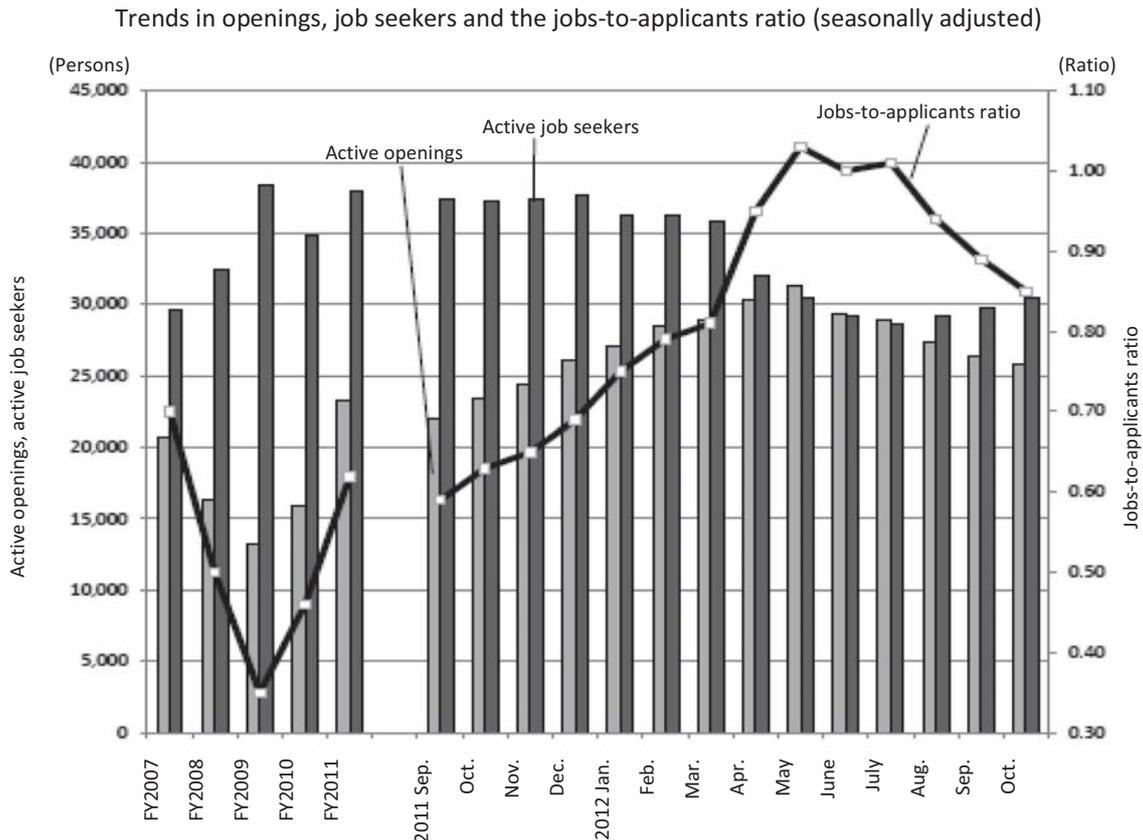
Whatever the case, the number of persons employed in services, medical, healthcare & welfare and other sectors is increasing in Miyagi Prefecture, led by construction due to temporary reconstruction demand. However, persons employed in the principal industry of marine product processing & other food manufacturing in Ishinomaki, Kesenuma and other coastal areas were still 34.7% fewer in Ishinomaki and 51.2% in Kesenuma as of October 2012, even eighteen months after the disaster, compared to just before the disaster (February 2011). In other words, although employment opportunities expanded quantitatively thanks to temporary construction-related demand, there has been no change in the structural problem of “shrinking employment opportunities” that had faced the region since before the disaster. This seems to have exacerbated the situation in coastal areas.

### **III. The Employment Situation in Iwate Prefecture**

#### **3.1. Trends in active openings and active job seekers in Iwate Prefecture**

In Iwate Prefecture, the jobs-to-applicants ratio started to grow steadily immediately after the disaster, peaking at more than 1.0 fourteen months later in May 2012, before suddenly falling to 0.85 as of October 2012. This was because, although the number of active openings had been tending to decrease at a constant rate since May 2012, the number of active job seekers turned to an increase from around August 2012.

**Fig. 15: Trends in active openings, active job seekers and the jobs-to-applicants ratio in Iwate Prefecture**



(Source) Iwate Regional Labour Bureau website (<http://iwate-roudoukyoku.isite.mhlw.go.jp/var/rev0/0068/0986/2010ippan.pdf>; obtained on Dec. 21, 2012).

### 3.2. Disparity in the jobs-to-applicants ratio by region of Iwate Prefecture (coastal and inland areas)

Trends in the jobs-to-applicants ratio in two parts of Iwate Prefecture – Kamaishi, in a coastal area damaged by the tsunami, and Kitakami, in an inland area with an industrial zone including a strong base in auto manufacturing – will now be compared.

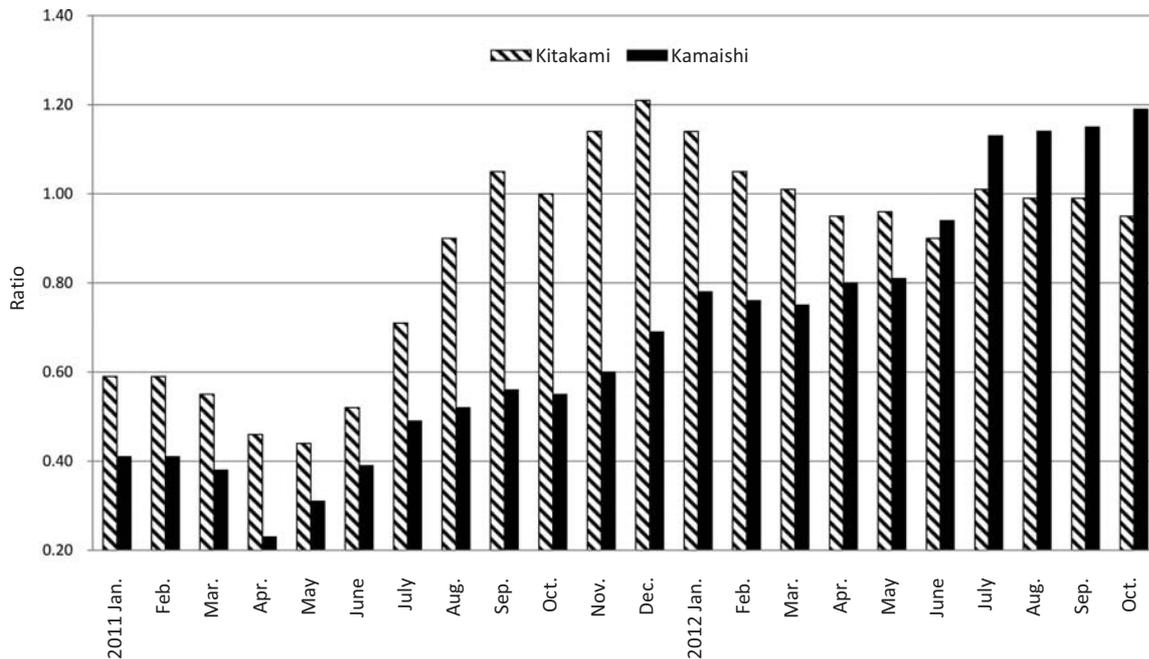
In inland Kitakami, the ratio fell for a short while immediately after the disaster, but quickly recovered to peak at more than 1.2 nine months later in December 2011. It then turned to a gradual decline, standing at 0.95 as of October 2012.

In coastal Kamaishi, by contrast, the ratio slumped sharply immediately after the disaster, but gradually grew thereafter, passing 1.0 sixteen months after the disaster in July 2012. Even as of October 2012, the ratio stood at 1.19, revealing an ongoing labor shortage. Incidentally, the region of Iwate Prefecture with the highest jobs-to-applicants ratio as of October 2012 was Ofunato (1.30). This suggests a severe labor shortage in coastal areas of Iwate Prefecture, particularly in construction.

In other words, in inland areas that escaped direct damage from the disaster, the jobs-to-applicants ratio rose sharply from immediately after the disaster, passed 1.0 six months after the disaster to signal a labor shortage, and gradually decreased thereafter. As of

October 2012, however, there was no great change in the situation. In tsunami-affected coastal areas like Kamaishi, conversely, reconstruction demand finally started in earnest nearly a year after the disaster, and there is an ongoing state of labor shortage.

**Fig. 16 Trends in the active opening ratio in a coastal area (Kamaishi) and an inland area (Kitakami) of Iwate Prefecture**



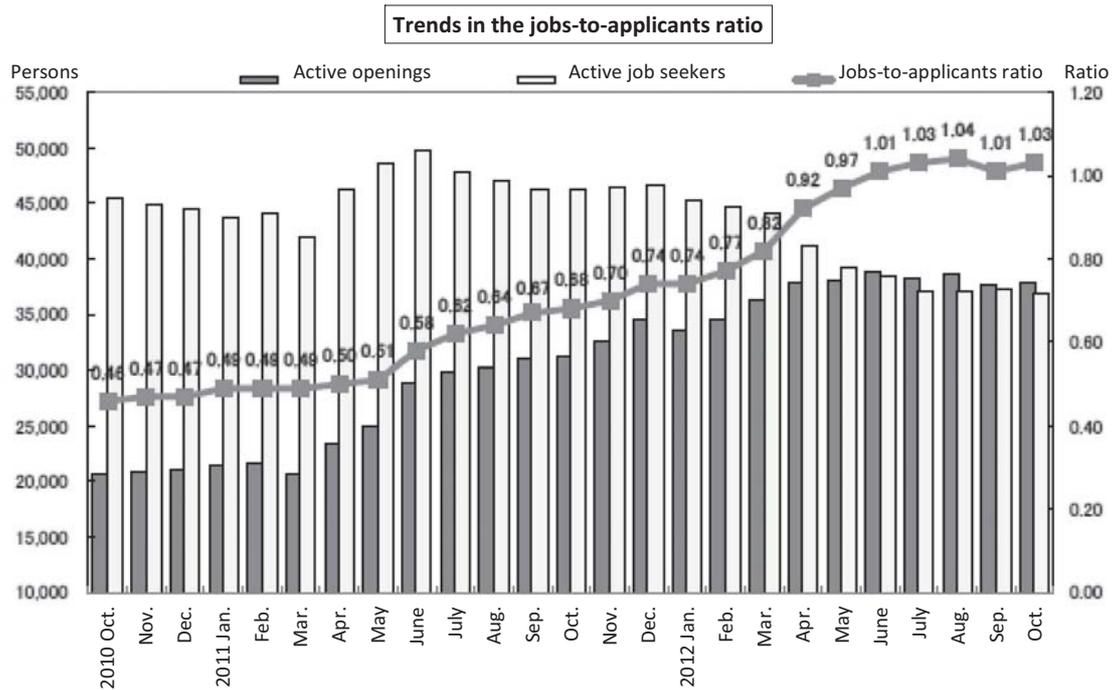
(Source) Compiled from data on the Iwate Regional Labour Bureau website (<http://iwate-roudoukyoku.jsite.mhlw.go.jp/var/rev0/0068/0986/2010ippan.pdf>; obtained on Dec. 21, 2012).

## IV. The Employment Situation in Fukushima Prefecture

### 4.1. Trends in active openings and active job seekers in Fukushima Prefecture

In Fukushima Prefecture, the jobs-to-applicants ratio was 0.49 just before the disaster in February 2011, but active openings gradually increased in number from immediately after the disaster. As a result, active openings outnumbered active job seekers fifteen months later in June 2012, and a situation of labor shortage was ongoing as of October 2012.

**Fig. 17: Trends in active openings, active job seekers and the jobs-to-applicants ratio in Fukushima Prefecture**



Monthly figures are seasonally adjusted.

(Source) Fukushima Regional Labour Bureau website (<http://fukushima-roudoukyoku.isite.mhlw.go.jp/var/rev0/0068/1350/20121130102122.pdf>; obtained on Dec. 21, 2012).

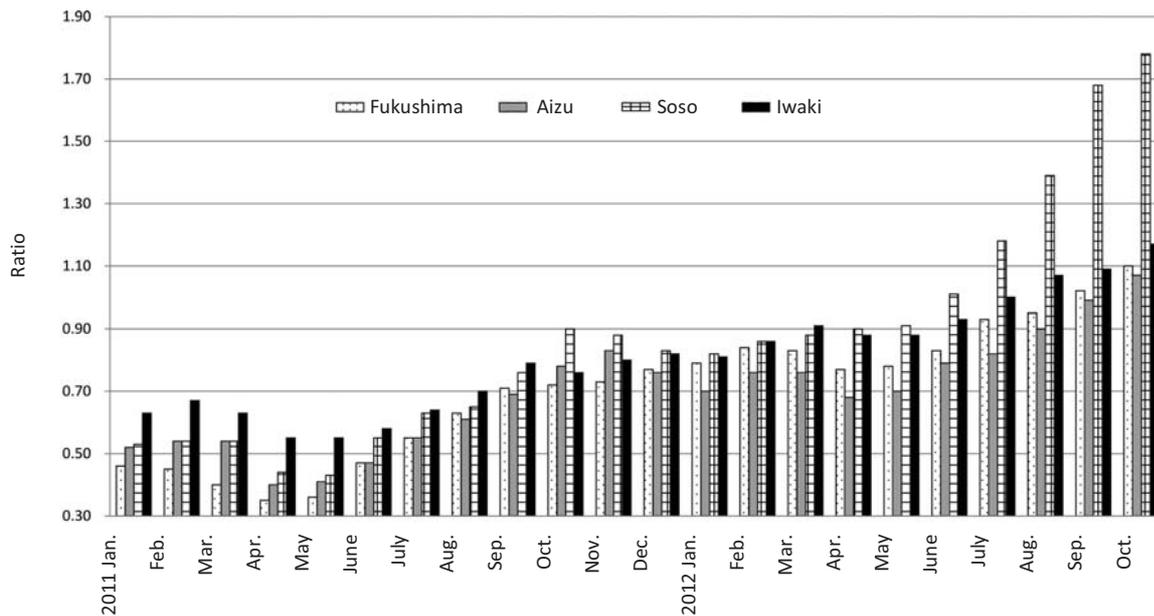
#### 4.2. Disparity in the jobs-to-applicants ratio by region of Fukushima Prefecture (outskirts of nuclear evacuation zone, and other areas)

Trends in the jobs-to-applicants ratio in two parts of Fukushima Prefecture – “Soso” (the two towns of Soma and Futaba adjacent to the nuclear evacuation zone) and areas other than this – will now be examined.

The ratio started to increase gradually immediately after the disaster, remaining high at between 0.8 and 0.9 in Soso and Iwaki from around six months later in October 2011. However, fifteen months later in around June 2012, the jobs-to-applicants ratio started to grow rapidly in all areas. The jobs-to-applicants ratio rose particularly quickly in Soso, reaching nearly 1.8 as of October 2012.

In other words, the employment situation gradually improved up to about six months after the disaster, and did not change greatly thereafter, but because the reconstruction started in earnest fifteen months later in around June 2012, labor shortages became more acute in all areas. In particular, the jobs-to-applicants ratio in Soso as of October 2012 was by far the highest in all six prefectures of Tohoku (1.78), showing that the labor shortage was most severe.

**Fig. 18: Trends in the jobs-to-applicants ratio on the outskirts of the nuclear evacuation zone and in other areas of Fukushima Prefecture**



(Source) Compiled from the Fukushima Regional Labour Bureau website

(<http://fukushima-roudoukyoku.isite.mhlw.go.jp/var/rev0/0068/1350/20121130102122.pdf>; obtained on Dec. 21, 2012).

Despite the revision of the evacuation zone and the start of full-scale decontamination of radiation in Fukushima Prefecture, many people still evacuated outside the prefecture (particularly those in younger age groups), and the number of active job seekers has decreased. As in Miyagi Prefecture, however, job openings are brisk in the construction sector as well as in wholesale & retail trade, medical, healthcare & welfare and others. As a result, local companies are unable to secure sufficient human resources and labor shortages are increasing in severity. These problems with employment are thought highly likely to delay the reconstruction effort in Fukushima Prefecture.

### *Acknowledgement*

The author would like to take this opportunity to thank the Miyagi Regional Labour Bureau most sincerely for providing detailed analytical data for the analysis of statistical data on employment from Miyagi Prefecture.