
The Impact of the Great East Japan Earthquake on the Labor Market — Need to Resolve the Employment Mismatch in the Disaster-Stricken Areas

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This paper analyzes the impact of the Great East Japan Earthquake on population movements and employment situation, mainly in the three disaster-stricken prefectures (Iwate, Miyagi and Fukushima Prefectures). As for population movements, emigration from the disaster-stricken areas has increased since the earthquake. In Fukushima Prefecture in particular, the number of young emigrants rose rapidly due to the impact of the accident at Fukushima Daiichi Nuclear Power Station. The employment situation, as measured by the status of job offers and applications, in the three disaster-stricken prefectures, appears on the surface to be improving, as the number of new job offers is growing as a result of an increase in offers related to post-earthquake reconstruction and a recovery in production in the manufacturing industry. However, in fact, the employment situation remains severe, with the number of applicants for employment insurance benefits growing by around 40% in the 10 months from the earthquake compared with the same period of the previous year. The earthquake has not had a significant impact on employment on a nationwide basis. However, in the three disaster-stricken prefectures, it has affected seriously through a mismatch between job offers and applicants. It is thus an urgent task to take measures to resolve the mismatch.

I. Past Studies on the Impact of Major Natural Disasters and Characteristics of the Industries in the Disaster-Stricken Areas

1. Previous Literature on the Economic Impact of Major Natural Disasters

When evaluating the damage caused by a major natural disaster, it is necessary to estimate the extent of not only direct damage, including human and physical damages, in the disaster-stricken areas but also indirect damage, such as the nationwide economic impact (impact on income, employment, industrial production, inflation, etc.). However, according to a survey conducted by Cavallo and Noy (2010) on the economic impact of natural disasters, while engineering studies to estimate direct damage (for instance, human damage, crop damage and damage on infrastructure, including buildings and structures) is well researched, little economic studies to estimate indirect damage have yet been done. Cavallo and Noy (2010) summarized that most of the studies cited in their survey indicated that natural disasters produce a negative impact on economic growth in the short term. Moreover, they

placed a greater emphasis on the need to consider through what channels natural disasters produce a negative impact on economic growth and whether such channels exist only temporarily or for a long period of time. The past research has not reached consensus on the extent of estimated long-term impact on economic growth. One methodological problem regarding the measurement of the impact is the difficulty of comparing the post-disaster growth rate with the hypothetical growth rate of what would happen if the disaster doesn't occur.

Even though the nationwide economic impact of a major natural disaster may be limited, the damage toward to the local economy of the disaster-stricken area is significant. The analysis of the labor market in New Orleans, which suffered extensive damage from Hurricane Katrina, provides a number of implications for us. Vigdor's (2008) labor market analysis in the period before and after the hurricane showed how local communities' post-disaster reconstruction process is affected by the economic characteristics they had before the disaster. In New Orleans, which had a population of more than 400,000 people, most residents were evacuated from the city immediately after the hurricane. Over the two-year period from the hurricane, only around half of the evacuees returned to their homes. From the analysis of the patterns of reconstruction in other cities after past natural disasters, great fires and wars, Vigdor (2008) concluded that cities that have few economic advantages are likely to experience an accelerated population outflow after a disaster while cities with strong economic advantages are likely to overcome the temporary outmigration caused by a disaster and see a recovery to and above the pre-disaster level in the long term. Vigdor pointed out that New Orleans falls under the category of cities with few economic advantages. He noted that the scarcity of employment opportunities due to a lack of major industries other than tourism-related businesses becomes an obstacle to encourage population inflow toward New Orleans. Meanwhile, an analysis by Groen and Polivka (2008) of the labor market for people evacuated from the areas devastated by Hurricane Katrina showed that although the evacuees remained in a disadvantageous position in the market during the 13-month period from the hurricane, the degree of their disadvantage declined as they adapted to their new economic situation. All the same, it was confirmed that evacuees who have been unable to return to their original residence location have faced a more disadvantageous position in the labor market than evacuees who have returned home.

The Great Hanshin-Awaji Earthquake, which hit the Hanshin-Awaji region in western Japan, is a typical case of an earthquake occurring directly under a densely-populated urban area. Nagamatsu (2006) was a prominent research concerning the process of economic reconstruction after the Great Hanshin-Awaji Earthquake. He conducted a survey and pointed out that while the effective ratio of new job offers to applicants steadily recovered after the earthquake, there was a mismatch between job offers and applicants regarding the job type, age, and employment arrangement, etc.

Our research objective is to analyze the process of reconstruction in the areas devastated by the Great East Japan Earthquake in light of the past studies mentioned above, with

a particular focus on population movement and the employment situation. The rest of this paper is organized as follows: in this section below, we analyze the characteristics of the industries of the three disaster-stricken prefectures in the Tohoku region (Iwate, Miyagi and Fukushima Prefectures; hereinafter referred to as “the three disaster-stricken Tohoku prefectures”) and the status of reconstruction. In Section II, we analyze the population outflow from the three disaster-stricken Tohoku prefectures since the earthquake, and in Section III, we analyze the recovery in the employment situation in those prefectures and across Japan. In Section IV, we provide our conclusion.

2. Characteristics of the Industries of the Three Disaster-Stricken Tohoku Prefectures

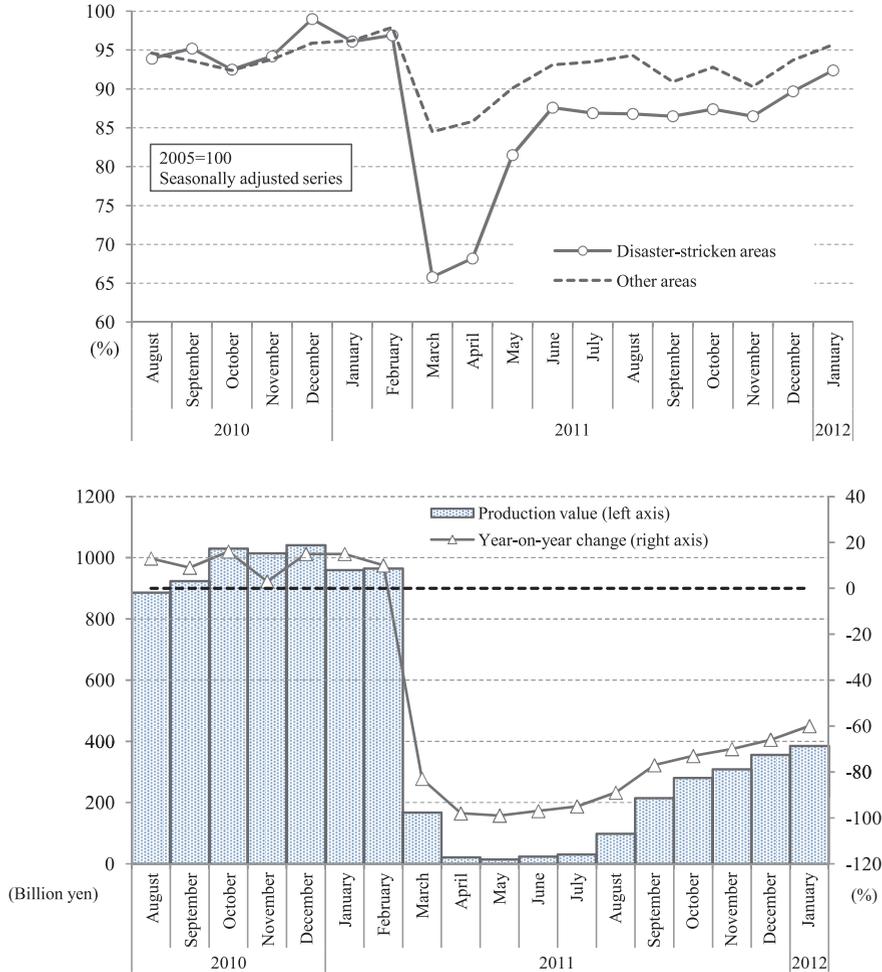
According to the 2010 Population Census, industries that accounted for more than 10% of the overall employees in the three disaster-stricken Tohoku prefectures were “wholesale/retail industries”(16.8%), “manufacturing industry” (16.2%) and “medical and welfare services” (10.4%). Meanwhile, when we look at the breakdown of employees by subdivision of industry based on the 2011 Economic Census, we see that industries that accounted for relatively large shares of the overall entire workforce of employees in the three disaster-stricken Tohoku prefectures were “food production industry” (2.7%), “electronics parts, devices and circuits manufacturing industry” (1.7%) and “transport machinery and equipment manufacturing industry” (0.9%). The “fishery food production industry,” which employed 0.8% of the overall workforce, accounted for around 30% of the employees working in the food production industry, so the food production industry is presumed to have suffered significant damage from the tsunami in the coastal area. According to Figure 1, which shows monthly changes in the Industrial Production Index (hereafter, IPI) on a nationwide basis and in the disaster-stricken area, the Index dropped steeply both on a nationwide basis and in the disaster-stricken area in March and April, immediately after the earthquake, before rebounding in May. However, the IPI for the disaster-stricken areas has stayed around 7 to 8 percentage points lower than the pre-earthquake level. The level of year-on-year growth in the production value in the tsunami-flooded areas, as shown in Figure 1, dropped steeply immediately after the earthquake and has remained low since then. The earthquake and tsunami dealt serious damage to the fishery product processing industry, which was the mainstay industry of the three disaster-stricken Tohoku prefectures, with long-lasting effects.

II. The Earthquake’s Impact on Population Movements

1. Changes in Net Migration in the Three Disaster-Stricken Tohoku Prefectures

In this section, we look at the status of net migration in the three disaster-stricken Tohoku prefectures as shown in the Annual Report on the Internal Migration in Japan

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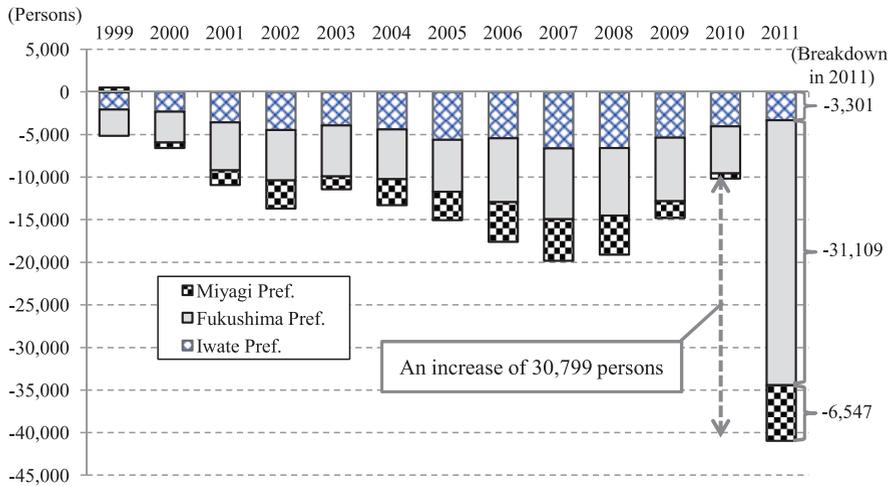


Sources: Ministry of Economy, Trade and Industry, *Industrial Production Index for Disaster-Stricken Areas and Other Areas* (estimate) and *Estimated Production Value (on a year-on-year basis) of Industrial Facilities Located in Tsunami-Flooded Areas (59 facilities)* (estimate).

Figure 1. Changes in the Estimated Industrial Production Index in the Disaster-Stricken Areas

derived from the Basic Resident Registers. This report is compiled on the basis of data on immigrants submitted to municipal governments. Therefore, it should be kept in mind that people who left the disaster-stricken areas are counted as emigrants only if they submitted an immigration application to the municipality where their new residence is located.¹ Figure 2

¹ As for the number of people evacuated from each of the three disaster-stricken Tohoku prefectures as of December 15, 2011, the number stood at 59,993 for Fukushima Prefecture, at 8,597 for

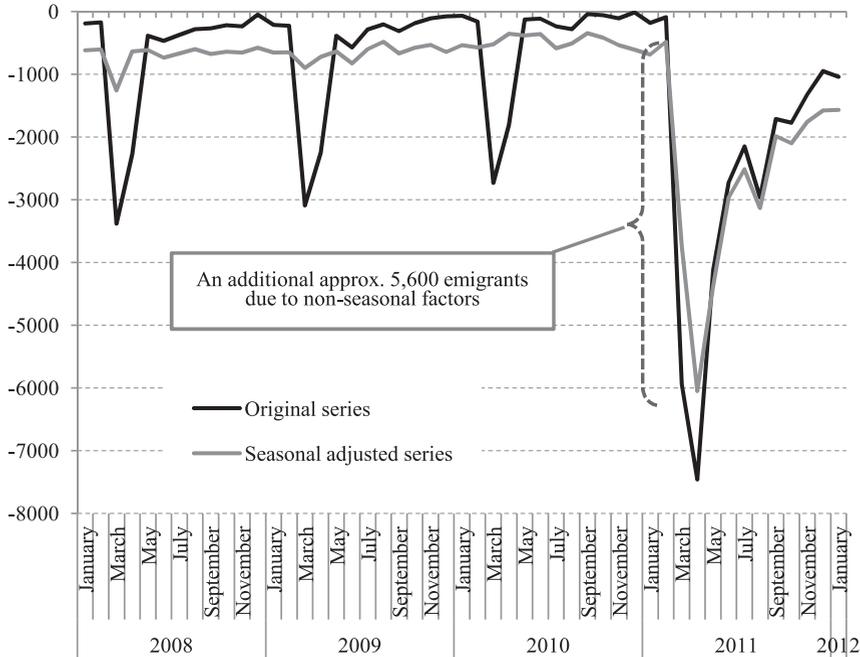


Source: Ministry of Internal Affairs and Communications, *Annual Report on the Internal Migration in Japan Derived From the Basic Resident Registers* (from 1999 to 2011 [from March to December]).

Figure 2. Net Emigration in the Three Disaster-Stricken Tohoku Prefectures (From 1999 to 2011 [Total in the March-December Period])

provides a comparison between the total net migration (negative figures indicate net emigration) in the three disaster-stricken Tohoku prefectures in the post-earthquake period of March through December 2011 and in each year between 1999 and 2010. It shows that net emigration from the three disaster-stricken Tohoku prefectures increased by 30,799 people in 2011 compared with 2010. In particular, net emigration from Fukushima in 2011 came to 31,109 people (it is equivalent to 1.5 percent of total Fukushima population), accounting for around 80% of the total net emigration from the three disaster-stricken Tohoku prefectures. The steep rise in net emigration from Fukushima Prefecture is considered to reflect the impact of the accident at the Fukushima Daiichi Nuclear Power Station as well as the earthquake impact. In Fukushima Prefecture, emigration increased in all age groups in the March-December period of 2011 compared with the same period of the previous year. Emigration in age groups younger than 44 years old recorded a particularly sharp increase (an increase of 8,799 in the 0-14 age group, of 2,237 in the 15-24 age group, 6,102 in the 25-34 age group and 4,524 in the 35-44 age group). The increase of nearly 9,000 in emigration in the 0-14 age group presumably indicates that many parents with young children moved out of Fukushima Prefecture due to concerns over the impact of the accident at the Fukushima

Miyagi Prefecture and at 1,545 for Iwate Prefecture. These figures are roughly double the net emigration numbers in the period from March to December 2011. According to the most up-to-date data (as of February 23), the number of evacuees stood at 62,674 for Fukushima Prefecture, at 8,548 for Miyagi Prefecture and at 1,566 for Iwate Prefecture (data compiled by the Reconstruction Agency).



Source: Calculated based on the *Annual Report on the Internal Migration in Japan Derived from the Basic Resident Registers* by the Ministry of Internal Affairs and Communications (from January 1999 to January 2012).

Figure 3. Seasonally Adjusted Net Emigration from Fukushima Prefecture

Daiichi Nuclear Power Station. The decline in the population of younger people due to the post-disaster evacuation is expected to aggravate such problems as the declining birthrate, aging of society and a labor shortage in the disaster-stricken areas in the near future.

2. Net Emigration from the Three Disaster-Stricken Tohoku Prefectures by Gender and Age

Net emigration from the Tohoku region fluctuates by season (usually increases in March and April in every year). However, in Fukushima Prefecture, net emigration after the earthquake became much larger in 2011 than usual. In order to distinguish the earthquake effect from seasonal effect on emigration, we employed X-12 ARIMA seasonal adjustment method. We used the monthly emigration data regarding Fukushima Prefecture in the period from January 1999 to January 2012 for this seasonal adjustment estimation. Then we can detect outlier value, which is considered to indicate the earthquake effect. Figure 3, which summarizes the analysis results, shows that there was a net emigration of around 5,600 people due to non-seasonal factors (i.e. the earthquake effect) between March and April 2011.

Our seasonally adjusted emigration data shows that net emigration has not yet returned to the pre-earthquake level although it is gradually returning toward that level.

III. Employment Situation in the Three Disaster-Stricken Tohoku Prefectures

1. Post-Earthquake Changes in the Employment Situation

(1) Changes in the Number of Job Offers, Applications, and Placements, etc. in the Three Disaster-Stricken Tohoku Prefectures

Regarding the employment situation in the three disaster-stricken Tohoku prefectures after the Great East Japan Earthquake, while the number of effective job offers exceeded about 100,000 for four consecutive months from September 2011, the number of effective job applicants reached over 140,000. In addition, the number of employment insurance benefits recipients is growing on a year-on-year basis. The employment situation in the disaster-stricken areas thus remains severe.

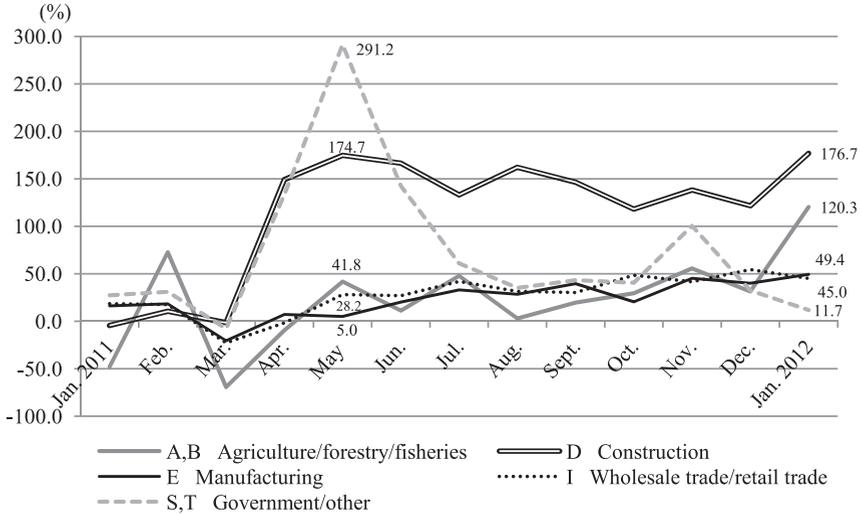
After the earthquake, the number of new job offers continued to rise in the three disaster-stricken Tohoku prefectures due to an increase in job offers related to post-earthquake reconstruction and a recovery in production in the manufacturing industry. In January 2012, the number stood at 45,752.

According to Figure 4, which shows year-on-year changes in the number of job offers by industry, offers in the “construction industry” rose particularly sharply, recording a year-on-year growth of 176.7% in January 2012. Job offers in the “public service, etc.” sector are also increasing due to the use of the job creation fund program from April through June. Job offers in the manufacturing industry have also gradually recovered since April 2011, posting a year-on-year increase of 49.4% in January 2012.

On the other hand, the number of new job applicants declined after peaking in April and has been stable since September. In January 2012, the number reached at 29,430. According to Figure 5, which shows year-on-year changes in the number of new applicants who left their previous jobs due to employer-side reasons between April 2011 and January 2012, the number of such applicants temporarily rose in Fukushima Prefecture in December, 2011. That is presumably because employers that had suspended business operation while avoiding job reduction until then eventually decided to dismiss employees. The number of job applicants declined moderately after peaking in those prefectures in June and has recently been stable on a month-to-month basis. In January 2012, the number declined on a year-on-year basis in all three disaster-stricken Tohoku prefectures. However, during the period, this year on year changes in the number of applicants in the area continued to be higher than that in a nationwide basis.

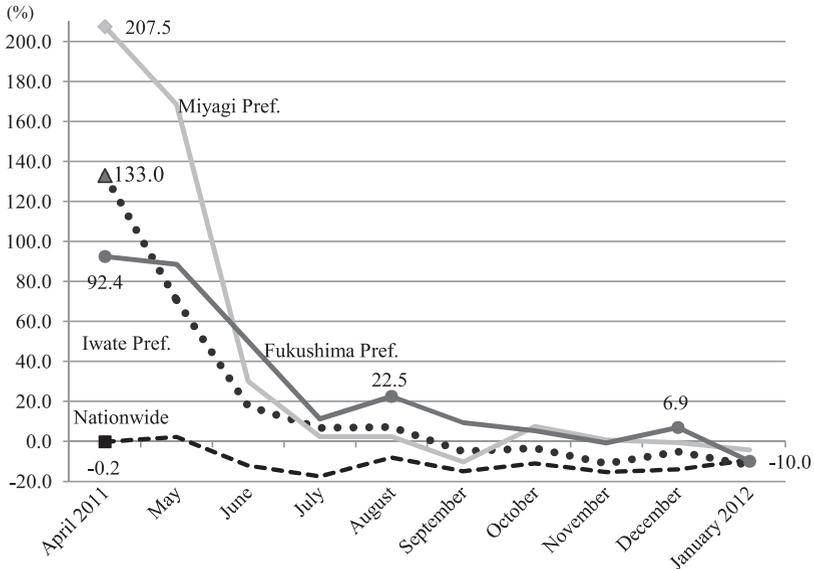
As described above, the employment environment in the three disaster-stricken Tohoku prefectures appears on the surface to be recovering. However, as an employment mismatch has arisen, mainly in the coastal regions, where the earthquake damage was

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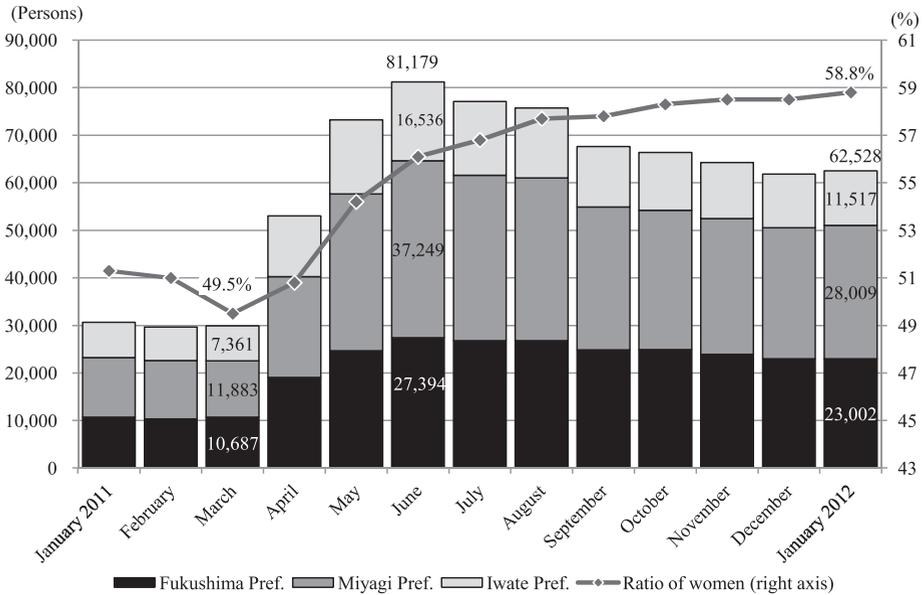
Source: Ministry of Health, Labour and Welfare, *Report on Employment Service* (January 2012).

Figure 4. Year-on-Year Changes in the Number of New Job Applicants by Industry in the Three Disaster-Stricken Tohoku Prefectures (Comparison of Raw Numbers for 2011 with Those for 2010)



Source: Ministry of Health, Labour and Welfare, *Report on Employment Service* (January 2012).

Figure 5. Year-on-Year Changes in the Number of New Applicants for Permanent Jobs Who Left Their Previous Jobs Due to Employer-Side Reasons (Comparison of Raw Numbers for 2011 with Those for 2010)



Source: Ministry of Health, Labour and Welfare, *Monthly Report on Employment Insurance Service*.

Figure 6. Changes in the Number of Employment Insurance Benefits Recipients in the Three Disaster-Stricken Tohoku Prefectures (Including Recipients for Whom an Extension of the Provision Period Has Been Granted for Various Reasons)

significant, the employment environment in the disaster-stricken areas remains severe.

(2) Changes in the Number of Employment Insurance Benefits Recipients in the Three Disaster-Stricken Tohoku Prefectures

While the effective ratio of job offers to applicants is on an uptrend, the number of applications for unemployment insurance benefits totaled around 230,000 (a year-on-year increase of 40%) in the 11-month period from March 12, 2011, to February 19, 2012. According to Figure 6, the number of employment insurance benefits recipients (including recipients for whom an extension of the provision period has been granted for various reasons) gradually declined since peaking at 81,179 people (a year-on-year increase of 101.9%) in June, it is equivalent to 5.4 percent of total number of insured works in Fukushima on February 28, 2011. In January 2012, the number reached at 65,528 people (a year-on-year increase of 103.8%).

Since April 2011, the ratio of women to all employment insurance benefits recipients has been rising, standing at 58.8% in January 2012, indicating that the employment situation for women is severe. In the coastal region, the fishery product processing industry, which

was employing a large number of women, including part-time workers, suffered significant damage, and many displaced workers there have been unable to find new jobs. As a result, the number of effective job applicants increased, making the employment situation for women severe. In the coastal region of Miyagi Prefecture, where the damage was significant, the number of permissions for employment insurance benefits rose 328.2% in the coverage area of the Ishinomaki Public Employment Security Office between March 12, 2011, the day after the earthquake, and January 22, 2012, compared with the same period of the previous year, and the number increased 571.7% in the coverage area of the Kesenuma Public Employment Security Office. Compared with the situation in inland regions, the employment situation in the coastal region remains particularly severe.

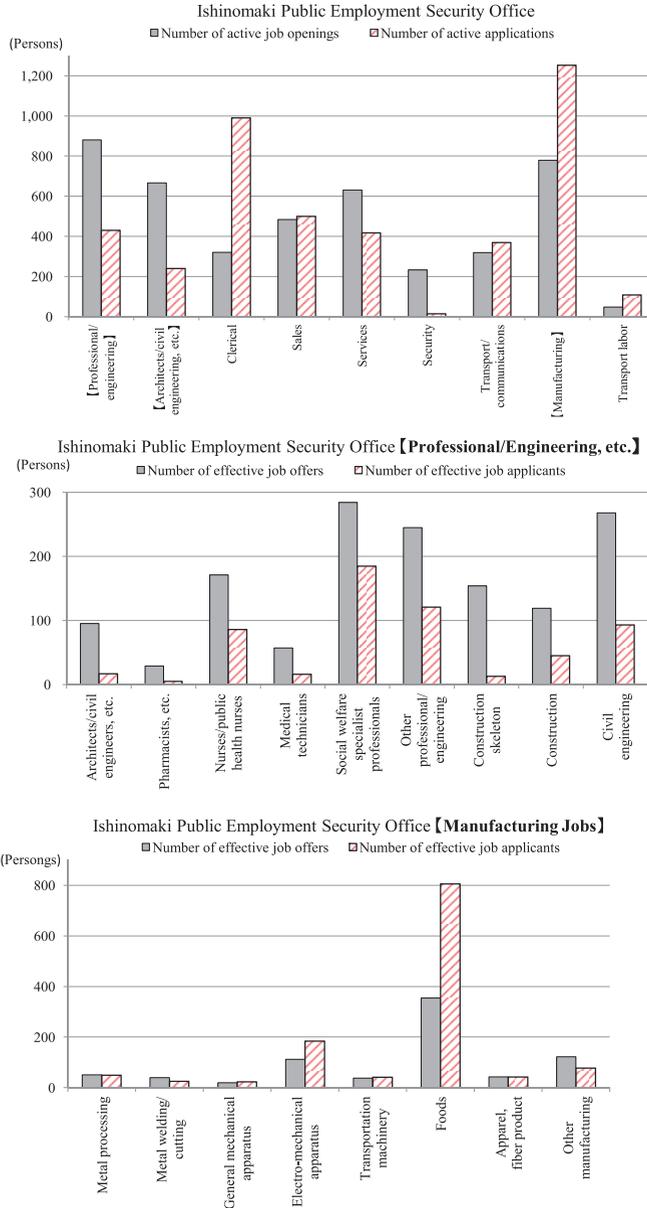
(3) Employment Mismatch

In the three disaster-stricken Tohoku prefectures, the effective ratio of job offers to applicants improved for eight consecutive months from May. However, a mismatch between job offers and applicants has arisen in the disaster-stricken areas. While there is a large number of job offers for people with qualifications and skills related to “professional and technical jobs” and “construction and civil engineering workers,” applicants with the matching qualifications and skills are in shortage. According to Figure 7, which shows the employment situation in the coverage area of the Ishinomaki Public Employment Security Office, there is a great demand for professional and technical workers regardless of types of occupations. Job offers in the manufacturing industry are not strong enough to accept all job applicants in the sector, with the scarcity of job offers in the food production industry accounting for most of the overall labor demand weakness in the sector. Given that the fisheries product processing industry was prosperous in the coastal region before the earthquake, this presumably indicates displaced workers’ strong desire to obtain the same jobs as the ones in which they were engaged before the disaster. In the disaster-stricken areas, it is important to shape the policy agenda in improving the employment situation while taking account of the characteristics of the local industries. We conduct further analysis regarding the employment mismatch in the next section.

2. Status of Job Offers and Applications by Job Type (Employment Mismatch)

In this section, based on the mismatch indicator used by Jackman and Roper (1987), we estimate the impact of the mismatch between job offers and applications that has affected unemployed people in the disaster-stricken areas. For the estimation, we use a prefecture-by-prefecture breakdown of the Report on Employment Service by the Ministry of Health, Labour and Welfare.² The mismatch indicator used by Jackman and Roper (1987) is

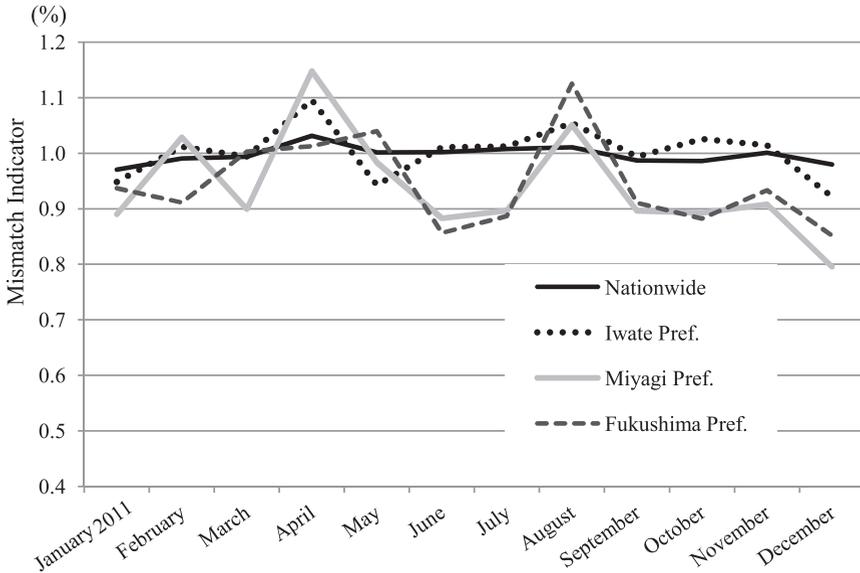
² The Report on Employment Service represents statistics compiled based on the results of job mediation activities conducted by the Public Employment Security Offices across Japan. It should be noted that according to the 2010 Survey on Employment Trends by the Ministry of Health, Labour



Source: Miyagi Labor Bureau, *Job Offers-Applicants Balance Sheet* (January 2012).

Figure 7. Numbers of Job Offers and Applicants in Miyagi Prefecture (January 2012)

and Welfare, people who obtained jobs through Public Employment Security Offices accounted for 21.5% of all people who obtained jobs (26.2% if people who obtained jobs through the internet service provided by the Public Employment Security Offices are included). It should also be noted that jobs covered by the analysis do not include the types of jobs that are not mediated by the Public Employment Security Offices, such as management jobs.



Source: Estimated by the authors based on prefecture-by-prefecture data of the *Report on Employment Service* by the Ministry of Health, Labour and Welfare. The mismatch indicator was calculated with regard to 65 types of job.

Note: The mismatch indicator is as defined by Formula (1).

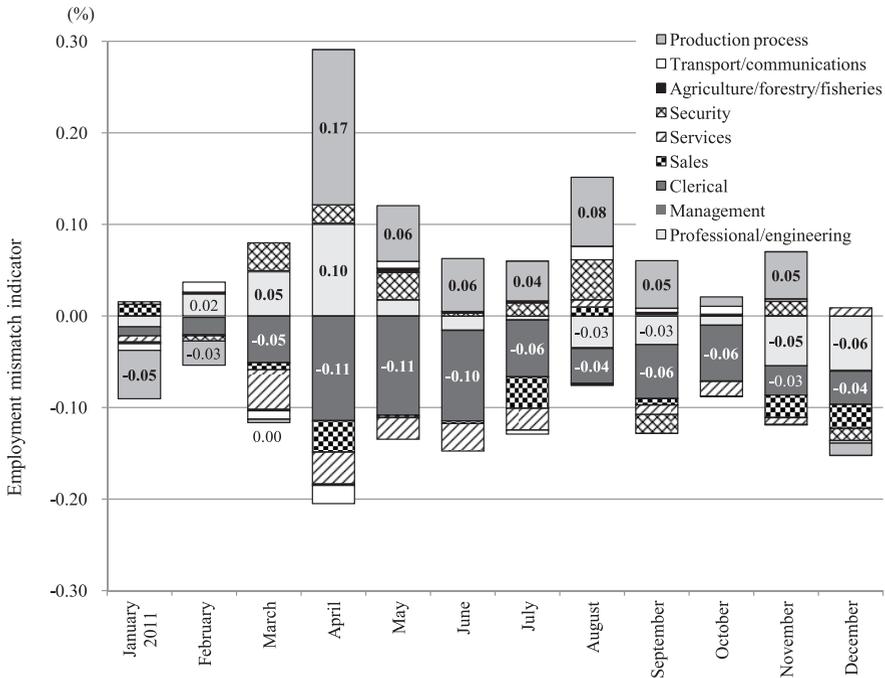
Figure 8. Changes in the Mismatch Indicator (Comparison between Nationwide, Iwate, Miyagi, and Fukushima Prefectures; Year-on-Year Growth Rate)

defined as the ratio of unemployed people who cannot obtain jobs due to an employment mismatch to all unemployed people. The estimation formula is as follows:

$$(1) \quad \frac{1}{U} * \frac{1}{2} \sum_{i=1}^n \left| U_i - \left(\frac{U}{V} \right) V_i \right| = \frac{1}{2} \sum_{i=1}^n \left| \frac{U_i}{U} - \frac{V_i}{V} \right|$$

“N” represents the number of jobs available. U_i stands for the number of job applicants and V_i stands for the number of job offers regarding job type i . U and V are arrived at through the formulas: $U = \sum_{i=1}^n U_i$ and $V = \sum_{i=1}^n V_i$. We computed the mismatch indicator as defined by Formula (1) on a prefecture-by-prefecture basis for each month between January 2010 and December 2011. Figure 8 shows the mismatch indicators on a national average basis and for the three disaster-stricken Tohoku prefectures.

To exclude the effects of seasonal factors, we calculated the growth rate of the mismatch indicator for each month of 2011 compared with the same month of the previous year (year-on-year). On a national average basis, the mismatch regarding the job type increased in April, the month after the earthquake, but in other months, the mismatch indicator did not



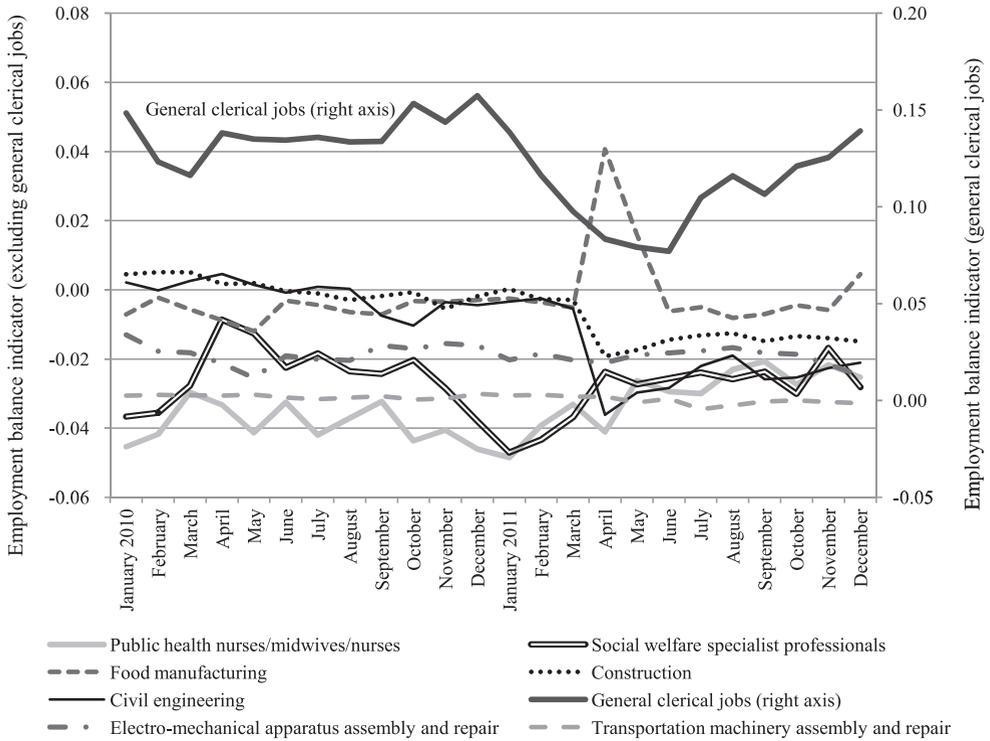
Note: The mismatch indicator indicates which of the job vacancy ratio and the unemployment rate is higher with regard to each job type, so the “ $U_i/U - V_i/V$ ” part of Formula (1) is calculated with regard to each job type. To remove the effects of seasonal factors, year-on-year changes are also indicated. The values (both positive and negative) larger than 0.03 are written in bold characters. Jobs which are difficult to classify were excluded.

Figure 9. Contributions by Job Type to the Year-on-Year Growth Rate of the Employment Mismatch Indicator

show significant fluctuations compared with the usual years. In the disaster-stricken areas, a mismatch arose in April but later declined. In August, a significant mismatch arose again. Since then, the mismatch has gradually been declining.

Which job types contributed to the significant mismatch in April and August? Figure 9 shows the contributions of nine job types to the year-on-year growth rate of the mismatch indicator. Immediately after the Great East Japan Earthquake, the mismatch grew regarding professional and technical jobs, manufacturing process and labor affairs jobs and security jobs. However, clerical jobs made negative contributions to the growth rate of the mismatch indicator.

Figure 10 shows the mismatch status regarding subdivisions of job types presumed to have been affected significantly by the earthquake. In order to show which of the vacancy ratio and the unemployment rate is higher with regard to each job type, Figure 10 expresses the mismatch as the employment balance indicator used by Dario Sciulli, de Menezes and



Note: The selected job types are those for which the mismatch indicator showed a significant change in 2011 as shown in Figure 9. The authors selected subdivisions of job types for which the mismatch indicator showed a significant year-on-year change.

Figure 10. Employment Balance Indicator Regarding Specific Jobs

Vieira (2008) instead of as the mismatch indicator used by Jackman and Roper (1987). We first calculated the mismatch indicator with regard to each job type and arrived at the balance indicator through the formula $U_i/U - V_i/V$ without the use of absolute values. The balance indicator may take values between -1 and 1. The closer the value of the indicator is to 1, the larger the shortage of job offers is in relation to job applicants with regard to a relevant job type. The closer the value is to -1, the larger the shortage of job applicants is.

Regarding clerical jobs, there are usually more job applicants than job offers. After the Great East Japan Earthquake, the excess of job applicants was resolved temporarily. However, since June 2011, the number of job applicants has stayed higher than the number of job offers.

Regarding construction and civil engineering, labor supply and demand was balanced throughout 2010. However, after the earthquake, a labor shortage arose and has continued due to reconstruction-related demand. Regarding public health nurses, midwives, hospital

nurses as well as social welfare workers, there was already a labor shortage before the earthquake. In March 2011, when the earthquake occurred, the shortage worsened but has been improving gradually since April.

3. Time-Series Analysis of the Impact of the Earthquake on Employee Numbers, Wages and Working Hours

In this section, we estimate the impact of the earthquake on employment, wages and working hours. Figure 11 shows the seasonally adjusted employment, wage and working hours indexes (2005=100) for overall industries and for the manufacturing industry on a nationwide basis as published in the Monthly Labour Survey. Published figures are seasonally adjusted using the X-11 default setting of X-12-ARIMA, so the impact of outlier figures is unclear. Therefore, we made seasonal adjustments using the same method as was described in Section II. 2, and we did not observe any notable impact of outlier figures after the earthquake compared with the pre-earthquake level. Regarding the wage index, there are downward outliers, mainly in June and December. The presence of these outliers is presumed to reflect a decline in bonuses compared with the pre-earthquake level. When we compared these indexes and the nationwide industrial production index, we did not observe any notable correlation with regard to the employment and wage indexes. However, the working hours index declined temporarily at the time of the Lehman Shock and the Great East Japan Earthquake and later returned to the previous levels, and this was very similar to the movement of the nation-wide industrial production index. From this, it is clear that although the earthquake had little notable impact on employment and wages, working hours temporarily decreased presumably because companies adjusted working hours in response to the earthquake impact. However, compared with the response we observed at the time of the Lehman Shock, the adjustments were small, and the working hours index recovered to the pre-earthquake level in around six months.

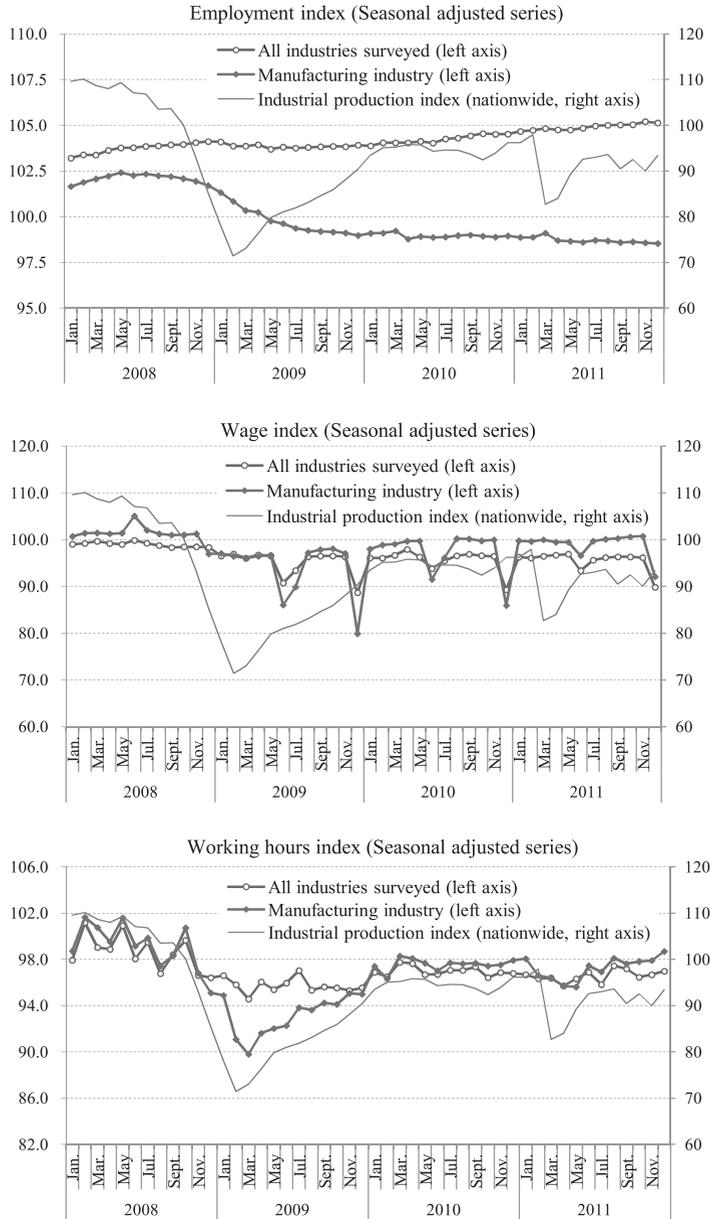
IV. Conclusion

This paper analyzed the impact of the Great East Japan Earthquake on industry, population movements and employments, mainly in the three disaster-stricken Tohoku prefectures (Iwate, Miyagi and Fukushima Prefectures) in light of past studies on the economic impact of major natural disasters.

The manufacturing industry, including the fishery product processing industry, which was the mainstay industry of those prefectures, suffered significant damage from the earthquake, with long-lasting effects.

The three prefectures have experienced an increase in net emigration since the earthquake. In Fukushima Prefecture in particular, the number of young emigrants rose rapidly due to the impact of the Fukushima Daiichi Nuclear Power Station. Net emigration from

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Source: Calculated based on the *Monthly Labor Survey*. (from January 1999 to December 2011) by the Ministry of Health, Labour and Welfare.

Note: The figure shows only the nationwide results because the survey regarding the three disaster-stricken Tohoku prefectures was suspended in some months after the earthquake.

Figure 11. Seasonally Adjusted Employment, Wage and Working Hours Indexes
(Overall Industries and the Manufacturing Industry)

Fukushima Prefecture has stayed higher than the pre-earthquake level since the earthquake impact as well as seasonal factors boosted the number of emigrants.

As for employment, the number of new job offers has increased in the three disaster-stricken Tohoku prefectures due to an increase in demand for post-earthquake reconstruction and a recovery in production in the manufacturing industry. Meanwhile, the number of applications for employment insurance benefits totaled around 220,000 (a year-on-year increase of around 40%) in the 10-month period from the occurrence of the earthquake. In the disaster-stricken areas, while there are many job offers for people with qualifications and skills related to “construction and civil engineering,” a mismatch between job offers and applicants has arisen. It is an important task to steadily improve the employment situation while taking account of the characteristics of the local industries.

As for the mismatch regarding the job type that has affected unemployed people in the disaster-stricken areas, a significant mismatch arose in April, the month after the earthquake, but the mismatch indicator later declined on a year-on-year basis. In August, a significant mismatch arose again. The mismatch grew particularly regarding professional and technical jobs, manufacturing process and labor management jobs and security jobs. Regarding construction and civil engineering, labor supply and demand was balanced throughout 2010. However, after the earthquake, a labor shortage arose and has continued due to reconstruction-related demand. Since peaking in August 2011, the mismatch regarding the job type has been declining. However, it continues to be an urgent task to resolve the mismatch, as it is necessary, in response to an increase in job applicants amid the lengthening of the period of unemployment, to promote skills development support so as to encourage displaced workers to look for a different type of job than the one in which they were engaged before the earthquake.

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