What initially began as a domestic American financial and economic crisis following the collapse in mid-September of 2008, of Lehman Brothers, a major U.S. investment bank, almost instantaneously spread throughout the global economy. In the words of the Annual Report on the Japanese Economy and Public Finance for fiscal year 2009, the global financial and economic crisis had a “shocking” impact on the Japanese economy, forcing gross domestic product (GDP) to decline at a greater rate than in any other major advanced country. In the years that followed, Japan’s GDP failed to recover smoothly. The financial and economic crisis, which was dubbed “a gigantic tsunami that occurs only once a century,” laid bare the vulnerability that was “beyond anticipation (souteigai)” of the government at the time.

On March 11, 2011, two and a half years after the Lehman shock, a gigantic earthquake and the accompanying tsunami, which were literally of a magnitude that would occur “only once in a thousand years,” hit the eastern part of Japan on the Pacific coast, also triggering a protracted radiation crisis at Tokyo Electric Power Company’s (TEPCO’s) Fukushima Daiiichi nuclear power plant. Several hundreds of thousands of survivors in the world’s second or third largest economic power had to do without essentials of life such as drinking water and food, and, in many cases, not simply for a few days, but for an extended period of time. Regarding the question of whether people in contemporary Japanese society can feel secure about still having access to basic necessities of life in the face of crises, the recent disaster made evident that Japan’s system for safeguarding people’s basic survival was indeed precarious and undependable.

It should be kept in mind that Japanese society, even before it was hit by the Great East Japan Earthquake or the Lehman shock, had already been beset by a host of serious social problems. Japan’s suicide cases have exceeded 30,000 persons per year for more than a decade, ranking it among the highest in terms of suicide rate of countries for which statistics were available. In addition, Japan’s poverty rate is among the highest of any
advanced country. Thus, the vulnerabilities and precariousness of Japanese society had already fully revealed themselves by the mid-2000s. The Japanese government, however, did not even officially acknowledge that poverty existed in Japan (Osawa 2010b: 45-46).

This triple disaster of unprecedented scale followed close on the heels of the global financial and economic crisis. The areas most severely affected by the disasters had been vulnerable on many counts, such as increasing rates of elderly populations, a lack of job opportunities and other income sources, and the burdens of chronic fiscal deficits weighing heavily upon municipal governments. Nuclear power plants are concentrated in these kinds of ailing municipalities. Furthermore, if we are justified in regarding the damage caused by natural disasters as being a function of both the destructive power (or hazard) of the disasters as well as social vulnerability, as introduced by the social geographer Keiko Ikeda (2011) as an internationally agreed understanding in disaster studies/practices, then some of the damage that appears, at first glance, to be the inevitable consequence of the tsunami, actually resulted from the way in which Japanese society had been organized, and could therefore have been mitigated, if not avoided.

In discussing the various factors underlying social vulnerabilities, it is customary to consider demographic (e.g., aging and depopulation) and economic (e.g., employment opportunities and incomes) factors, as well as ethnic and religious divisions. However, given the fact that elderly and impoverished populations consist mostly of women, it should not be overlooked that various facets of these vulnerabilities are threaded through one common denominator, namely, gender.

It is of utmost urgency that Japan rebuild itself into a society that is resilient to both economic shocks and natural disasters. The purpose of this paper is to elucidate, by undertaking a comparative gender analysis of livelihood security systems, the vulnerabilities inherent in the Japanese economy and larger society, and in so doing, to shed light upon how Japan should approach the project of reconstruction.

We can say that a person’s livelihood is secure, if his or her basic necessities for life are satisfied on a continual basis. In countries that are industrialized, the livelihood of individuals has been secured through the interaction of private institutions and practices, of families, private firms, labor unions, and non-profit cooperatives on the one hand, and by government-implemented “social policies” on the other. When I use the term “social policies” I refer not only to social security-related measures – social insurance, social and public assistance, the tax system and various social services including child care, education, health and medical care, nursing care – but also to government regulations and expenditures (fiscal as well as tax) concerning family and employment relations. What I call a “livelihood security system” refers to the entire matrix of laws and governmental policies on the one hand, and private institutions and practices on the other (Osawa 2007, 2010a, and 2011a).
II. An International Comparison of Livelihood Security Systems in the Mid-2000s: Japan’s System as the Epitome of the “Male Breadwinner” Model

Based on the actual conditions in advanced countries circa 1980, this theory of livelihood security system proposes a typology of the livelihood security systems in these countries using three ideal types: the “male breadwinner” model (continental European countries and Japan), the “work-life balance” model (Scandinavian countries), and the “market-oriented” model (Anglo-Saxon countries). Gender is the linchpin for an analysis of these models given that the workplaces or families are implicitly expected to operate according to specific standards and norms inflected by gender roles and the gendered division of labor.

1. Income Distribution and Redistribution

Let us examine how livelihood security systems can influence the relative poverty rate. A household in “relative poverty” is defined as one whose equivalent income (i.e., household income adjusted by the number of its members) is less than 50 percent of the median income. The ratio of the total number of people belonging to households in relative poverty to the entire population is referred to as the “relative poverty rate” (hereafter, “poverty rate”), is a measure of the state of income distribution (dispersion) below the median income, and listed as the first item in the “indicators for the monitoring of the European strategy for social protection and social inclusion” 1. The poverty rate is usually calculated on the basis of disposable income but is also often calculated on the basis of market income to enable comparison and reference.

“Market income” (also called “initial income”) is the sum total of employee income, business income, farming and livestock-farming income, family worker income, interest and dividends, rental income, remittances, miscellaneous income, and corporate pension benefits. “Disposable income” is calculated as market income plus social security cash benefits minus direct taxes and social security contributions. In other words, disposable income is the amount that an individual is left with after income transfers (other than indirect taxes) by the government. Thus, the difference in poverty rates calculated using market income and disposable income represents the extent of poverty reduction accomplished by governmental income transfers (other than indirect taxes). For the purposes of this paper, we will define the “poverty reduction rate” resulting from income redistribution as the difference in the two poverty rates divided by the market-income-based poverty rate.

As shown in Figure 1, a comparison of OECD countries in the mid-2000s indicates that poverty rates were highest in Anglo-Saxon countries (excluding the UK), followed by Japan, Korea, and Southern European countries. Poverty rates in northern European countries were low, and while those in continental Western European countries were higher, they were still lower than the OECD average, with the exception of Germany (OECD 2009: Figure 3.2). Poverty rates were high in countries with market-oriented livelihood security systems and low in countries with systems aiming at work-life balance. Poverty rates in countries with livelihood security systems based on the male-breadwinner model were the second highest,
following upon countries with market-oriented livelihood security systems; among the former, especially high poverty rates could be found in Japan and Southern European countries.

Figure 1. Relative poverty rates of OECD Countries (mid-2000s)

Note: Countries from Denmark to Mexico are ranked by increasing figure on the level of disposable income. The figure for retirement-age population for Korea is 48.51%
Source: OECD 2009: Data of Figure 3.2.

In probing further into why Japan’s poverty rate was among the highest in OECD countries, let us focus our attention on members of “working-age households”, defined as those households headed by persons of working age (between 18 and 64). Figure 2 shows that poor households in Japan are characterized by the following elements. First, 40% of poor “working-age households” include two or more employed adults in Japan, Iceland and Turkey. This contrasts with countries such as Norway, Australia, UK and Germany, where poor “working-age household” either lack a working member or are single-parent households; in Japan, households even with two and more income earners find it difficult to pull themselves out of poverty (Osawa 2010b: 40-41).

Figure 2. Structure of relative poverty in households headed by a working-age (aged 18-64) head, by work attachment of household members, mid-2000

Source: OECD Factbook 2009.
Second, the poverty rate in Japan is higher than in other countries because of the peculiar way the government carries out “income redistribution” through taxation and social security systems. This second point needs further elaboration. As shown in Figure 3, in the mid-2000s most European countries achieved poverty reduction rates of 50 percent or higher for the working-age population, notably through income redistribution, and thus limited disposable-income-based poverty rates to 10 percent or lower. However, the experience was substantially different in a number of countries including Mexico, the United States, Canada, Spain, South Korea, and, in particular, Japan. Japan’s disposable-income-based poverty rate stood at 12.47%, which was the sixth highest among OECD countries. At 8.2%, Japan’s poverty reduction rate was the second lowest after Mexico’s. Despite the fact that Japan’s market-income-based poverty rate of 13.58% was the second lowest after South Korea’s, Japan’s disposable-income-based poverty rate showed negligible improvement over the market-income-based rate, resulting in Japan’s poverty reduction rate being among the lowest of all OECD countries.

**Figure 3. Relative poverty rates among the working-age population, on levels of market income and disposable income, and poverty reduction rate**

Note: Countries from Denmark are ranked by increasing figure on the level of disposable income. Source: OECD 2009: data contained in Figure 3-9.

The situation in Japan is unique not simply because of Japan’s low poverty reduction rate, but moreover, contrary to the widespread understanding of income redistribution as a means of reducing poverty, redistribution in Japan is “reverse-functional” in the sense that it ends up increasing the poverty rate. If we focus on the statistics for two groups of working-age households – those where all adult members are working (dual income couples with or without children, single working parents and single working individuals) and those where only one of the couple is working (with or without children) – we come across the following astounding reality about income redistribution in Japan: only in Japan does the poverty reduction rate for households where all adults are working actually take on a negative value (Figure 4). In other words, the direct tax system, social security contributions and cash benefits exacerbate the household’s vulnerability to poverty.
An overwhelming majority of households with one-earner couple are headed by male breadwinners. Redistribution in Japan is “reverse-functional” in the sense that such redistribution ends up increasing the poverty rate for substantial portion of its population except male-breadwinners. This clearly highlights the fact that, among OECD countries, Japan’s livelihood security system is by far the most oriented around the male-breadwinner model (to the detriment of dual-earning households and single-adult households), and that this orientation is attributable not so much to institutions and practices in the private sector, but to the redistribution undertaken by the government through taxation and social security. These observations beg the question, “what, in Japan’s tax and the social security systems, leads to such peculiar income distribution?”

More specifically, this stabilizing function works as follows. When the economy is on an upward swing, the progressive taxation system increases tax revenues at a rate faster than GDP growth, keeping the economy from overheating. When the economy is on the decline, on the other hand, tax revenues decrease at a rate faster than the drop in GDP, while government expenditures expand as a result of increases in payouts of unemployment and other benefits, putting a brake on the recessionary trend. In 2006-07, Japan’s revenue (inclusive of both tax revenues and social insurance premiums) as a percentage of nominal GDP – which the Cabinet’s Annual Report adopts as a proxy for the built-in stabilizing function – was the smallest among advanced countries (Cabinet Office 2010: 1-6-07).

The Cabinet’s Annual Report posited that redistributive fiscal policy backed by large-scale annual revenue would help the economy become resilient to fluctuations. Given that the Japanese public finance was in the polar opposite situation to this predicted state, albeit it “shocking”, it is not “beyond anticipation (souteigai)” that Japan’s GDP was more seriously affected by the Lehman shock than that of other advanced countries.
To briefly review how this state of affairs developed, the scale of annual government revenues in most advanced countries had continually increased over an extended period of time until the early 2000s. In Japan, however, after peaking at 29.5% in 1990, the annual government revenue as a share of GDP declined until 2003 and stood at 27.6% in 2010. Meanwhile, the social security burden has continued to increase, accounting for 12.4% of GDP in fiscal 2010. Annual government revenues were on a declining trajectory as a result of the declining trend of tax burden as a ratio of GDP, which had decreased from 21.3% in fiscal 1990, to 15.2% in fiscal 2010 (http://www.cao.go.jp/zci-cho/gijiroku/senmon/2010/_icsFiles/afieldfile/2010/11/18/sen2kai9.pdf). The decreasing tax burden ratio was not so much the result of a natural decrease in tax revenue due to economic stagnation and shrinkage, as it was the consequence of tax breaks in the late 1990s for corporations, high-income-earners and/or propertied individuals. These tax breaks rendered the income tax system far less progressive than in the past.

Figure 5-1. Total revenue from tax and social security contribution as percentage of GDP

![Figure 5-1](image)

Figure 5-2. Tax revenue as percentage of GDP

![Figure 5-2](image)
The continuing growth of social security contributions, whose regressive nature is evident from Figure 6, has imposed heavier burdens on lower income earners. This is partly because social insurance contributions (or a portion of them at the least) are charged at a flat rate irrespective of the insured person’s income (e.g., a National Pension contribution paid by a Category 1 insured person, and the monthly flat premium for the National Health Insurance plan) and also because social insurance contributions are not fully proportional to the insured person’s income as a result of the imposition of a contribution cap, of the “maximum monthly standard remuneration”.

Figure 6. Social insurance contributions as a percent of equivalent market income broken down by individual’s income bracket (2001 and 2007)

Note: The percentage represents the amount of social insurance contribution as a ratio of equivalent market income. The ratios for individuals in the below-0.5-million-yen bracket were 110.4% in 2001, and 155.4% in 2007. Source: Shotoku Saibunpai Chosa Hokokusho (Report of the Income Redistribution Survey), 2002 and 2008 editions.
In other words, the manner in which social security contributions (or government revenues) are collected in Japan has grown increasingly unfavorable for low-income earners over the last two decades, and this has diminished both the economic stabilization function built into the government’s fiscal activities and the income redistribution function. In parallel with these developments, the rate of increase in social security benefit payouts was strictly curbed, especially since fiscal 2002. As mentioned earlier, Japan’s poverty reduction rate for the working population, achieved through the redistributive mechanisms of the tax and social security systems, was the lowest among OECD countries. Moreover, Japan was the only OECD country in which the poverty reduction rate assumed a negative value for households with all adult members working. It is clear that this state of affairs was brought about by the revisions of the tax system and “structural reforms” in the social security system starting in the early 1990s.

III. “Tohoku is Still a Colony.”

1. Lopsided Growth and Over-Concentration of Economic Activities and Population in Tokyo

At a symposium held in Hitotsubashi University on May 1, 2011, Norio Akasaka stated that he was shocked to realize that “the Tohoku region is still a colony.” A scholar of Japanese folklore who has proposed the establishment of Tohoku-gaku (study in the Tohoku region) as its own discipline, Akasaka called Tohoku a “colony” to highlight the fact that the region has been forced to host dangerous or undesirable facilities in exchange for subsidies, and has been condemned to supply food, labor power, and electricity to the urban areas (Akasaka, Oguma, and Yamauchi 2011: 15).

When we look back at the path of economic growth of post-WWII Japan, there is no denying that the country’s growth has been centered in the industrial areas of the “Pacific Belt,” which extends for the most part southward along the Pacific coast, from Tokyo and its environs, to Nagoya, Osaka-Kobe, and down to northern Kyushu. While the problems of population and overcrowded cities have been concentrated in this belt, an increasing number of communities in the rest of the country have experienced crippling depopulation.

By no means did the government sit still, or do nothing to rectify this state of affairs. Rather, since 1962 it has devised and implemented several versions of its Comprehensive National Development Plan, with the stated objective of attaining “balanced national land development.” Prefectural and municipal authorities in the rural areas provided various incentives to entice private firms to establish their factories within prefectural or municipal borders, which resulted, to some extent, in the siting of new factories in sparsely populated areas. Private firms that set up shop in rural areas began producing goods and services for places where there had been little local demand (Jinno and Takahashi, eds. 2010: 2-4).

By the mid-1980s, the increased siting of new factories in rural areas along with other factors appears to have slowed the outflow of population from rural areas to the three largest urban centers. Despite this step in the right direction, a new trend towards over-concentration of economic activities and population in Tokyo and its environs began to gain momentum in the mid-1990s. This new trend overwhelmed the Comprehensive National
Development Plan and its goal to achieve well-balanced economic development, ultimately resulting in the abolition of the plan in 2005. During this new phase, it became common for private firms to locate new industrial plants overseas, prompting these firms to relocate their headquarters in Tokyo. Many firms based in Osaka and cities other than Tokyo also moved their headquarters or headquarter functions to Tokyo.

As part of these developments, a large number of high-income earners with managerial and planning skills left the provincial regions for Tokyo. Unlike the population outflow from rural to urban areas during the rapid growth period, which mainly took the form of the out-migration of low-income earners or people experiencing difficulty finding local work, this “brain drain”, or population outflow since the late-1990s has consisted of relatively well-to-do residents of rural areas (Jinno and Takahashi, eds. 2010: 4).

The degree of concentration of population and economic activities in Tokyo is anomalous by international standards. At least, it is not matched by any major Western city, and similar concentration is seen only in cities in emerging industrial countries. According to United Nations demographic statistics for 2009, the greater Tokyo area topped the list of the ten most populous urban centers of the world. Among the remaining nine cities, New York City at 6th place was the only major city in an advanced country, while the remaining slots were filled by major cities of emerging countries (Jinno and Takahashi, eds. 2010: 13-14).

Japan’s economic recovery in the 2000s was no less anomalous and lopsided. Especially worth noting is the inter-regional gap in tax revenues of local governments. It stands to reason that a difference in the economic size of any two municipalities would naturally result in a difference in the tax revenues of these municipalities; however, what is astounding is that the differences in municipal tax revenues are often much larger than would be expected from the differences in economic size. The prevalence of such disparities is ascribable to Japan’s local taxation system, which functions in such a way as to concentrate tax revenues in large cities (Jinno and Takahashi, eds. 2010: Chapter 1).

The process of economic recovery or “regional revitalization” that unfolded during the 2000s led to the bifurcation of local regions into those that experienced economic recovery and those that did not. Moreover, even in those regions where employment recovered to some extent, this recovery was achieved primarily by employing a larger number of non-regular workers (Jinno and Takahashi, eds. 2010: Chapter 2). Comparing performance by firm size reveals that large firms boosted profits, while the growth of smaller firms remained sluggish. The economic recovery in the first half of the 2000s moreover is characterized by a clear decline in household incomes, with the incomes of lower-income earners decreasing by greater margins than those of higher-income earners (Osawa 2010b).

It was in the context of this lopsided economic recovery that Japan was hit hard by the global financial and economic crisis of 2008. The crisis affected different countries to varying degrees, but, as pointed out at the outset of this paper, suppressed Japan’s GDP by the largest margin among the advanced countries. The reason the crisis dealt such a severe blow to Japan’s economy was because Japan’s growth had become heavily dependent on the production and export of a very limited number of manufactured goods, such as automobiles and IT-related electronic goods (Osawa 2010b).

Based on the discussion above, it is evident that “the Tohoku region has once again been colonized,” beginning in the late-1990s, and
especially during the 2000s. In the remainder of this section, I will focus on the cases of two municipalities that were seriously affected by the Great East Japan Earthquake: Futaba Town in Fukushima Prefecture, and Kamaishi City in Iwate Prefecture.

2. The End of Dependency on Nuclear Power Plants: The Case of Futaba Town, Fukushima Prefecture

Seriously affected by the radiation leaks from the Fukushima Daiichi nuclear power plant, the entire town of Futaba – its residents, the town office, and the town assembly – was forced to take refuge in Saitama Prefecture since March 2011. In 2009, the town was designated, under the provisions of the Law for Promoting Financial Health of Municipal Governments, as a “municipality in need of early fiscal rehabilitation.” Futaba is the first and only municipality so designated among all the municipalities hosting nuclear power plants, which are supposedly guaranteed lucrative inflows of various revenues (Asahi Shinbun, May 28, 2011, p. 3).

Let us briefly examine the process that has led to Futaba’s ailing finances. Ground was broken for the Fukushima Daiichi power plant in 1967, and commercial operations were begun in 1971. During the processes of determining plant location, construction, and for several years following the commencement of operations, Futaba was showered with considerable revenues, consisting mainly of government subsidies to communities hosting nuclear power plants under provisions of the Degen Sanpo (the three separate laws designed to promote the hosting of nuclear plants) and property taxes paid by TEPCO for its nuclear facilities. But cash inflow peaked as early as 1983. One outstanding feature of the tax and subsidy schemes related to the siting of nuclear power plants is that cash flow would begin to decline sharply 5 to 10 years after the commencement of plant operations (see Table 1). Starting in 1981, the town spent a total of 12.1 billion yen to install a public sewage system and, in 1990, began receiving tax subsidies allocated to financially distressed municipal governments for the first time in 11 years. In 1991, the Town Assembly adopted a resolution to host two additional nuclear reactors. Subsequently, in 1997, the town started spending large sums of money for large public works projects, including a 1.9 billion yen project for building a comprehensive health and welfare facility, a 2.9 billion yen project for constructing a comprehensive sports park, and one for building four-lane town roads (Kaneko and Takahashi, eds. 2008: Chapter 5).

In 2002 when TEPCO was found to have falsified its records of nuclear reactor inspections and to have covered up problems at the plants, Futaba Town put its 1991 resolution to host additional reactors on hold. In December of 2005, Katsutaka Idogawa was elected mayor of Futaba on the platform of “slashing large-scale public works projects.” But Futaba continued to experience difficulties in regaining financial health simply by cutting back expenditures. As a result, in fiscal year 2006, the town joined the country’s 10 most financially distressed municipalities, with its real debt service ratio soaring to 30 percent.

In June of 2007, the town assembly, acting in agreement with the mayor’s proposal to change the town’s existing policy on nuclear plant construction, passed a resolution to lift its 2002 freeze on hosting additional reactors. It was only a month later, however, that TEPCO’s Kashiwazaki-Kariwa nuclear power plant in Niigata Prefecture was damaged by the Chuetsu Offshore Earthquake off the Niigata coast, causing the plant to spew radiation-contaminated water into the sea.

Although the Kashiwazaki-Kariwa accident
### Table 1 Outlines of Major Subsidies Related to the Siting of Nuclear Power Plants

<table>
<thead>
<tr>
<th>Name of subsidy</th>
<th>Recipient of subsidy</th>
<th>Duration of subsidy payment</th>
<th>Maximum amount of subsidy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subsidy for dealing with matters related to initial procedures for electric power source siting.</td>
<td>A prefecture or a municipality that is expected to have within its borders either a nuclear power plant with a generating power of 0.35 million kW or more or a nuclear power plant that has been designated as a site for important power source development or for important power source promotion. (The subsidies to municipalities adjacent to the one hosting the nuclear power plant are paid through the prefectural government concerned.)</td>
<td>Phase I: From the fiscal year following the year in which the feasibility study for siting begins to the fiscal year in which the environmental assessment begins. Phase II: 10 years beginning in the fiscal year after the year in which the environmental assessment begins.</td>
<td>Phase I: 140 million yen/year Phase II: 980 million yen/year, not to exceed a total of 5.15 billion yen. (In case the nuclear power plant is not yet designated as a site for development or for promotion, the total subsidy should not exceed 3.95 billion yen.)</td>
</tr>
<tr>
<td>Subsidy for dealing with matters related to the promotion of electric power source siting.</td>
<td>The municipality hosting a nuclear power plant with a capacity of 0.35 million kW or more, and adjacent municipalities.</td>
<td>From the fiscal year in which construction begins until operations commence.</td>
<td>To be determined based on factors such as the plant’s generating capacity, and the applicable unit price for subsidy. (The amount of subsidy paid to the host municipality should be equal to the total of subsidies paid to the adjacent municipalities.)</td>
</tr>
<tr>
<td>Subsidy to municipalities adjacent to nuclear reactors.</td>
<td>A prefecture that has within its borders a municipality hosting a nuclear power plant with a capacity of 0.35 million kW or more, and municipalities that are adjacent to a hosting municipality. (The subsidies to the municipality hosting the plant and to the municipalities adjacent to that municipality are paid through the prefectural government concerned.)</td>
<td>From the fiscal year in which construction begins until operations are terminated.</td>
<td>The total for all municipalities hosting nuclear power plants within the prefecture concerned, calculated on the basis of the number of power consumers contracting for lighting (ordinary households and small shops), the amount of power contracted by these consumers, and the applicable unit prices for subsidy.</td>
</tr>
<tr>
<td>Subsidy to prefectures supplying electricity to other regions</td>
<td>A prefecture that satisfies the following two conditions: *The amount of power generated within its borders exceeds the amount consumed within its borders by a ratio of 1.5 or more. *The area of industry induction-encouraged regions in the prefecture totals 50% or more of the prefecture’s area.</td>
<td>From the fiscal year after the year in which construction begins until operations are terminated.</td>
<td>A certain maximum amount of subsidy is set for each bracket of power volume supplied to other regions.</td>
</tr>
<tr>
<td>Subsidy for dealing with matters related to long-term development of areas hosting nuclear reactors.</td>
<td>The municipality hosting a nuclear power plant.</td>
<td>From the fiscal year after the year in which operations commence until operations are terminated.</td>
<td>The amount is determined on the basis of unit prices for subsidy that correspond to the nuclear power plant’s capacity, duration of operations, amount of annual power generation, and other factors.</td>
</tr>
<tr>
<td>Subsidy for maintaining symbiotic relations with areas hosting nuclear reactors.</td>
<td>A prefecture that has within its borders a nuclear power plant, including reactors that has been in commercial operations for 30 years or more.</td>
<td>For a maximum of 5 years beginning in any fiscal year after 30 years of operations.</td>
<td>1.25 billion yen/year for one nuclear power plant, not to exceed 2.5 billion yen in total.</td>
</tr>
</tbody>
</table>

Note: All the subsidies listed above pertain to nuclear power plants.

certainly dampened the town’s enthusiasm, the plan to host additional reactors proceeded on schedule, as the subsidies for municipalities hosting new reactors were due to be terminated soon thereafter. In the end, the town began receiving subsidies amounting to nearly 1 billion yen a year over a four-year period beginning in 2008. And yet, in the following year, the town slipped into the status of “a municipality in need of early fiscal rehabilitation” (Kaneko and Takahashi, eds. 2008: Chapter 5).

To understand why Futaba increased expenditures while struggling with deficits, it is important to keep in mind that the national government’s policy was of expanding public investment to deal with trade imbalance between Japan and the United States; this was pursued along with its stimulus policy implemented in the 1990s that induced municipal governments to increase expenditures for public works projects of their own. More specifically, in the Structural Impediment Initiative negotiated with the United States in 1989-90, Japan agreed to expand domestic demand through increasing public works as a means of reducing the US-Japan trade deficit. The Kaifu government, in power from August 1989 to November 1991, committed to carrying out a “Basic Plan for Public Investments” worth 430 trillion yen over a 10-year period and the Murayama government, in power from June 1994 to January 1996, subsequently expanded planned expenditures to 630 trillion yen. As the national government had already begun cutting back on expenditures in the mid-1980s to achieve “fiscal rehabilitation without tax hikes,” municipal governments were obliged to pay for expenditures for public works projects on their own. In this context, the “Basic Plan for Public Investments” represented an additional burden to again be borne by municipal governments (Mizuho Sogo Kenkyujo 2005: 5-6).

The prefectural government of Fukushima urged Futaba to take on a large portion of the public works projects allocated to the prefecture, on the grounds that the town, with its ample subsidies from hosting the nuclear plant, should have the financial resources to do so. The town was unable to turn down such requests and, as a result, is reported to have amassed debt. In an attempt to wean Futaba from its dependence on nuclear plant money, Mayor Idogawa launched a program to develop agricultural operations centered on the production of spinach and other high value-added vegetables (Kaneko and Takahashi, eds. 2008: 107-108, 115). The spinach crop grown in Futuba was the first agricultural product to be contaminated by radiation.

3. How to Regenerate a Former Company Town on the Wane?
The Case of Kamaishi City, Iwate Prefecture

More than 20 years after the Nippon Steel Corporation closed down the blast furnaces at its Kamaishi Works in 1989, Kamaishi City, which was once a company town known as a “town of iron,” was trying hard to transform itself into a town based on the manufacturing of machinery and foodstuffs, in addition to iron products. What was most indispensable to this reconstruction effort, however, was enticing manufacturing firms to set up operations in the city.

Not only has the city’s population decreased from a peak of 87,000 in 1960, to one half that, or 43,000, by 2005, it has also aged, with the share of elderly-single households in 2005 at 12.4 percent of the city’s households, being the highest among the 14 cities in Iwate Prefecture. These elderly-single households are assumed to be predominantly female households. Furthermore, the percentage of individuals receiving public
assistance has increased rapidly in the 2000s. Even though the ratio of assistance recipients to total population tends to be higher in urban areas than in rural areas, the ratio in Kamaishi in 2005 was higher than the national average. Many of the households receiving public assistance in Kamaishi were elderly households. It is also reported that there is a higher likelihood of low-income elderly households in the coastal areas receiving public assistance than households in the interior, where land is available for growing vegetables and other farm products to make up for shortages of income. It should also be kept in mind that the Sanriku coastal region facing the Pacific, in which Kamaishi is situated, and which suffered severe damage from the March 11th tsunami, had been increasingly experiencing serious problems of multiple-debt since the mid-1990s (Sato 2009).

As for employment opportunities in the Kamaishi area (consisting of Kamaishi City, Otsuchi Town, and Tono City), the effective ratio of job openings to applicants averaged 0.33 in 2007-09, and 0.23 in fiscal year 2009, both of which were significantly lower than their respective national averages of 0.5 and 0.34 (Iwate 2010). What is especially noteworthy is that, in 2006, as high as 60 percent of the women employed in the manufacturing sector in this area were employed as non-regular workers, a significantly higher percentage than both Iwate Prefectural (40 percent) and national (47 percent) averages. In fact, the city made much of the abundant supply of “female part-time workers” in its efforts to lure companies (Tsuchida 2009: 244, 265). Of a total of 26 companies that were lured to the city in the 30-year period since the early 1970s, only 14 continue to operate in the city. A large number of companies move to the city, “exploit” female part-time workers, and soon thereafter relocate.

In both an opinion poll conducted in Kamaishi in 2002, and a survey of small rural cities conducted by the Cabinet Office in 2005, both male and female respondents in Kamaishi answered in the affirmative (well over 10 percentage points higher than other small cities) the question of whether they thought “males are treated more favorably than females” both at work and in the family. It is interesting to note, that it was not only the women in Kamaishi who felt they were being treated less favorably than men but that the men also recognized their preferential treatment (Tsuchida 2009: 247).

Like other areas in the Sanriku coastal region, Kamaishi suffers from a shortage of practicing lawyers. In addition, the area has long been described as a medically underserved area with a shortage of physicians. In 2006, in Kamaishi and its environs, the number of practicing physicians per 100,000 residents was 129, comparing very poorly with national (218) and Iwate Prefectural (187) averages (Iwate Hoken Fukushi-bu 2009). It should be kept in mind that the need for both medical care and legal services has increased dramatically since the 3.11 disaster.

Eco-friendly tourism and eco-friendly town projects were regarded as potential areas for economic growth that could contribute significantly to the revitalization of Kamaishi. However, the very natural resources indispensable for such projects and activities were considerably damaged by the earthquake and tsunami.
IV. Disaster Reduction through Social Inclusion

The 3.11 disaster has resulted in a paradigm shift with regard to the question of how to deal with, or prepare for, natural disasters, from one of disaster prevention to one of “disaster reduction.” Take, for instance, a report submitted by the Reconstruction Design Council in Response to the Great East Japan Earthquake to Prime Minister Kan on June 25, 2011. The report entitled, “Towards Reconstruction: ‘Hope and beyond the Disaster’,” adopts, as an important keyword the term “disaster reduction,” which is defined as “an approach that seeks not to completely prevent or guard against a natural disaster, but rather focuses on minimizing the impact of such a disaster. Disaster reduction requires both hard measures (infrastructure-related measures including development of seawalls and coastal levees, etc.) and soft measures (people-oriented measures including disaster reduction-related training and education, etc.) to be implemented in a multi-layered approach” (Higashi Nihon Daishinsai Fukko Koso Kaigi 2011: Note 2). Similarly, the concept of “disaster reduction” is adopted as one of the “key concepts” in the “Basic Guidelines for Reconstruction in Response to the Great East Japan Earthquake,” which was announced by the Reconstruction Headquarters in Response to the Great East Japan Earthquake (Cabinet Office of Japan) on July 29, 2011.

According to the Basic Guidelines on Reconstruction, a prerequisite for “making communities resilient to disasters” is full mobilization of “soft and hard measures based on the concept of ‘disaster reduction’.” This is further elaborated under subsections (i) through (vi). Subsection (i) emphasizes that “‘tsunami-resilient community-building’ should be promoted as a countermeasure for tsunamis based on ‘multiple defenses’ that combine soft and hard measures in a manner most suitable to each community. It is imperative that such community-building efforts are guided by the concept of ‘disaster reduction,’ which places highest priority on ‘escape’ to prevent the loss of human life from natural disasters and thereby minimizes the damage.” Despite the document’s emphasis on mobilizing both “soft and hard measures,” subsections (ii) through (vi) deal almost exclusively with hard measures related to the fields of civil engineering and architecture, while touching only briefly on “soft” measures such as preparation of hazard maps, evacuation plans, evacuation drills, and expediting of research on buried cultural properties to facilitate swift reconstruction (Fukko Taisaku Honbu 2011: 7-8).

In connection to this, one important point to note is that, from the widespread viewpoint that has developed based on the experiences of disasters and practical post-disaster reconstruction efforts around the world and academic research on disasters in recent decades, the need to develop and implement what are called “soft measures” here is perceived more broadly as the need to overcome “social vulnerabilities” (Ikeda 2011). In other words, it is only by eliminating social divisions, inequality, and exclusion based on gender, geographic area, age, ethnicity, and religious belief, that we can build a society resilient to disasters. As explained by Yoshiaki Kawada, Director of the Disaster Reduction and Human Renovation Institution in Kobe, at an international symposium on disaster reduction in 2010:

“Japan’s priority in building disaster resilient communities is breaking out of the vicious cycle of cities and revitalizing rural areas. In concrete terms, Japan must maintain appropriate population density; develop appropriate income; enhance
human-information networks; and cultivate awareness of the connectivity between urban and rural areas” (Hito to Bosai Mirai Senta 2010: 9).

Although Kawada was a member of the Reconstruction Design Council in Response to the Great East Japan Earthquake, what might be called the “official” version of the concept of “disaster reduction” that was included in the Design Council’s recommendations and in the Basic Guidelines for Reconstruction announced by the Reconstruction Headquarters seems to have failed to do full justice to Kawada’s concept of “disaster reduction.”

It is, however, worth mentioning that the Basic Guidelines for Reconstruction explicitly underlines the importance of the “realization of social inclusion and promotion of ‘New Public Commons’” (in subsection iv), as part of its discussion of “nation-building which incorporates lessons learned from the Great Earthquake” (subsection (4)) under “Policies and Measures for Reconstruction” (section 5). We can assume that this echoes Naoto Kan’s pledge upon taking office as Prime Minister in June 2010 that he would strive to build “a society inclusive of each and every person.” The Basic Guidelines for Reconstruction specifically urges the government to take the following steps to promote social inclusion by “supporting efforts by municipalities to develop capacity for outreach, and by providing comprehensive and preventive support in the form of places where individuals in need can feel a sense of belonging, by providing customized support to individual clients, by developing human capital, by creating exemplars of one-stop counseling services, and by providing client-specific assistance by empathizing with each and every excluded person in need of help” (Fukko Taisaku Honbu 2011; 24).

If we really want to achieve social inclusion, it would be best for us to follow the approach taken by the European Union since the early 2000s, whereby we first define clear goals for remedying social exclusion and then develop yardsticks by which to measure progress towards those goals (Osawa 2011b). Once these prerequisites are satisfied, it is also desirable to see that the concept of disaster reduction be expanded in such a way that efforts to realize social inclusion are viewed as one and the same as efforts to make society resilient to disaster.

It is worthwhile at this juncture to recall the report prepared as part of the research project led by Naohiko Jinno at the Ministry of Land, Infrastructure and Transport, which, as early as 2003, envisaged “the multiplicity of Japan” made up of numerous “viable communities.” The report defines a “viable community” as “one which is never excessively dependent on specific undertakings, industries, or localities, but which has within its borders an appropriate mix of industries, handiwork, traditional cultures, and the like, that together encourage its residents to discover and appreciate, before all else, the resources and values inherent in their community and that enable residents to live in relative independence, while maintaining networks of mutual help and support with other communities.” With regard to future prospects, the report predicts that it will become all the more imperative “to encourage residents to discover valuable individuals, objects, industries, cultures, etc. inherent in the community, to cherish the local pride that emerges from within, and to thereby build a community that places the highest priority on securing residents’ livelihoods, rather than on encouraging residents to dream of luring factories from the outside or encouraging the dependence of communities on various large-scale projects” (Kokudokotsusho Kokudokeikaku-kyoku 2003).
V. Conclusion

By undertaking a comparative gender analysis of livelihood security systems in advanced countries, this paper aimed to elucidate the vulnerabilities inherent in the Japanese economy and larger society, particularly since the mid-1990s.

In Section 2, relative poverty rates were internationally compared to find that poverty rates were high in countries with market-oriented livelihood security systems (Anglo-Saxon countries) and low in countries with systems aiming at work-life balance (Scandinavian countries). Poverty rates in countries with livelihood security systems based on the male-breadwinner model (continental European countries and Japan) were the second highest, following Anglo-Saxon countries; among those countries centered on the male-breadwinner model, especially high poverty rates could be found in Japan and Southern European countries. Relative poverty rates are the focus of this analysis because they are the very first item in the list of indicators of social protection and social inclusion in EU.

The situation in Japan is unique not simply because of Japan’s low poverty reduction rate, but moreover, contrary to the widespread understanding of income redistribution as a means of reducing poverty, redistribution in Japan is “reverse-functional” in the sense that it ends up increasing the poverty rate. Japan’s livelihood security system is by far the most oriented around the male-breadwinner model, and this orientation is attributable not so much to institutions and practices in the private sector, but to the redistribution undertaken by the government through taxation and social security. By briefly examining tax revenue and social insurance contributions (revenues for the government), we found that the manner in which the government raises revenues, and social security contributions in particular, has grown increasingly unfavorable for low-income earners over the last two decades in Japan; this has diminished both the economic stabilization function built into the government’s fiscal activities and the income redistribution function.

In Section 3, we tracked the disparate path of post-WWII economic growth in Japan, and the fact that economic activities and the population have been extremely concentrated in Tokyo, notably since the mid-1900s. The process of economic recovery that unfolded during the early 2000s led to intersectional bifurcations between local regions, firm sizes, management and labor and income classes, to the detriment of local regions such as Hokkaido and Tohoku. In the context of this uneven economic growth, Japan was hardest hit by the global financial and economic crisis of 2008. The main reasons are that, on the one hand, Japan’s economic growth had become heavily dependent on the production and export of a quite limited number of manufactured goods, such as automobiles and IT-related electronic goods whose international trades were nearly collapsed by the crisis, and on the other hand, given that the fruits of the growth had been so unevenly, and even regressively, distributed and redistributed among different sectors of society.

In the latter half of Section 3, we looked into the cases of two municipalities, Futaba Town and Kamaishi City, which were seriously affected by the Great East Japan Earthquake; thus shed light on the desperation of their attempts to revitalize their region by enticing nuclear power plants or manufacturing firms, often in vain, given that this did not ultimately yield a more sustainable
financial situation for the municipalities, nor did it lead to the creation of sustainable job opportunities.

Finally in Section 4 we explore the concept of “disaster reduction” and its role in guiding the post-311 policy framework in Japan. We suggest that this concept be expanded such that efforts towards social inclusion may be understood to be part and parcel of the same goal of making communities resilient to disaster. In retrospect, we cannot but reflect on the fact that, had we at least tried to build “a multiplicity of Japan” grounded in numerous “viable communities”, we may have been able to reduce, beforehand, much of the damage incurred by the global financial and economic crisis, and that caused by the Great East Japan Earthquake.

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JAPAN’S POSTWAR MODEL OF ECONOMIC DEVELOPMENT HAS RENDERED JAPANESE SOCIETY VULNERABLE TO CRISES AND DISASTERS