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## **The Future of Long-term Care in Japan**

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## The Future of Long-term Care in Japan\*

**SHIMIZUTANI Satoshi \*\***

### Abstract

This paper reviews a decade of implementation of the public long-term care insurance (LTCI) program in Japan, which is now experiencing unprecedented pressure from its rapidly aging population. This overview of the program's features focuses on the incentive mechanisms and diversity, and examines official future projections of LTCI costs and their accompanying assumptions. It also includes the discussion of possible reforms for the LTCI program, with an emphasis on the micro aspects of LTCI, as evidenced by the Japanese Study on Aging and Retirement (JSTAR).

Keywords: Public long-term care insurance, Aging, Elderly care, Institutional care, Home care services, Future projections.

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## 1. Introduction

This paper reviews the first decade of implementation of Japan's public long-term care insurance (LTCI) program and discusses future directions and feasible reforms for the program. In particular, it critically re-examines previous cost projections for long-term care (LTC) with a focus on understanding incentive mechanisms and diversity, which are essential for effective future reforms.

During the ten years since the introduction of the LTCI program, the use of long-term care services has considerably grown. LTCI costs (including co-payments by clients) doubled from 4.0 trillion yen in FY2000 to 8.4 trillion yen in FY2011. Moreover, the National Council on Social Security (2006) estimates that LTCI costs will continue to explode in the future, increasing from 19 to 24 trillion yen by FY2025 (i.e., from 3.2% to 4.1% of GDP).

Underpinning the rapid increase in LTCI costs are the changes in demographics and family structure. The National Institute of Population and Social Security Research (2012) reports that the proportion of the population aged 65 years and older is expected to increase from 23.0% in 2010 to 25.1% in 2013 and to 33.4% by 2035 (Figure 1). While the absolute number of the elderly population peaks roughly in 2040, the proportion of elderly in the population is expected to further increase to 39.9% by 2055.<sup>1</sup>

The demographic change is driven by two forces. First is the extension of life expectancy, which is linked to an increase in the number of elders in need of care. The life expectancy at birth has extended considerably in the second half of the last century to 79.6 years for males and 86.4 years for females in 2010, which is now among the world's highest life expectancy rates.<sup>2</sup> Remarkably, in the projection, life expectancy at birth is assumed to continue to extend to 82.4 years (males) and 89.1 years (females) by 2035 and to 84.2 years (males) and 90.9 years (females) by 2060.

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<sup>1</sup> All projection figures in this section are taken from those based on the medium variant assumption.

<sup>2</sup> The life expectancy at birth was 59.6 years for males and 63.0 years for females in the 1950–1952 period. These life expectancy rates were below average among developed countries at the time.

The other force is a drop in the number of children being born (reduced fertility rate). The total fertility rate (TFR) modestly declined trend to 1.26 in 2005 and slightly recovered point of 1.39 in 2011.<sup>3</sup> TFR is assumed to continue recovering only modestly in the future, driving a further decline in population, which is the first in modern Japan except for in the times of war. Accordingly, the accelerating speed of the aging population becomes even more alarming. Together, these forces cause instability in the population pyramids of the future.

The structure of families has also undergone a dramatic change coupled with the change in demographics, resulting in a shrinking supply of family caregivers (informal long-term care). Traditional family support for elderly people has been eroding with the changing family structure from co-residence of multiple generations to nuclear family residences, and now even to single-member households (living alone). The latest official household projections by the National Institute of Population and Social Security Research (2013) indicate that the average family size will decrease from 2.42 persons per household to 2.20 persons between 2010 and 2035. For households headed by those 65 years and older, the proportion of single households is expected to increase from 30.7% to 37.7% between 2010 and 2035, and the proportion of nuclear households (a couple or a parent and/or their children only), which is still the dominant family structure, is expected to continue declining from 56.4% in 2010 to 53.6% in 2035 (Figure 2).<sup>4</sup> In addition, the proportion of people who have never married is expected to substantially increase from 21.0% to 29.0% for males and from 11.1% to 19.2% for females between 2010 and 2035.<sup>5</sup> These changes in demographics and family structures will presumably accelerate the decline in the supply of family caregivers.

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<sup>3</sup> Total fertility rate (TFR) declined rapidly in the 1950s and 1960s from 3.65 in 1950 to a level slightly exceeding 2.0 in the 1960s.

<sup>4</sup> For households headed by those 75 years or older, the proportion of single-member households will increase from 36.8% in 2010 to 39.7% by 2035. The proportion of older people living with a child was more than 80% in 1960, but by 2010, that number had fallen to 41% (Tamiya et. al., 2011).

<sup>5</sup> The proportion is a simple average of those aged 45–49 years and 50–54 years and who have never been married.

Given these observations, it is widely believed that Japan will face an enormous increase in costs for LTC in future. While LTC costs will inevitably increase to a certain level with the growing aging population, it is necessary to reconsider the current way of thinking approach prevalent in policy discussions, typically revealed in the assumptions of previous projections concerning increases in LTC costs. Most of the projections show that LTC costs will triple in the coming two decades with the growing elderly population; however, the validity of the assumptions for those projections have been rarely examined. The underlying paradigm for past projections relies heavily on a “typical old person” approach. The basic formula to compute future LTC costs is to multiply the number of elderly projected in the future by the LTC costs per person. In most cases, the official population projections are used for the former and some simple arithmetic is employed for the latter, that is, a constant decline from incumbent LTC expenditures per capita. While we observe some variations across the projections, the basic idea is commonly shared.

We see some flaws in the methodology. First, with a “representative person” approach, diversity (heterogeneity) across old people in terms of health, economic, and family status is ignored. The assumption is simply unrealistic as diversity does in fact affect the supply and demand of family care (informal), a close substitute for formal care. Second, the stationary assumption over generations has been that the changes in economic and health status as a person ages is identical across generations. But this assumption has not been validated and is not consistent with real data, which reveals large gaps in lifetime wages between younger and older generations. Third, incentive mechanisms and behavioral responses to policy changes have not been seriously taken into consideration. The mechanical assumptions are not confirmed by any empirical evidence, and thus, not linked to realistic behavioral responses that should be fully employed to improve the efficiency of the LTC program.

Put differently, a too simplified assumption of the “typical old person,” which relies on intra-generational and inter-generational homogeneity and is irresponsive to incentive

mechanisms, has been making policy debates futile. We speculate that the lack of comprehensive data accounts for the unrealistic discussions in the policy arena. Fortunately, the Japanese Study on Aging and Retirement (JSTAR)<sup>6</sup> started with its first wave in 2007 and completed the third wave in 2011/2012. Longitudinal data is now available from the JSTAR study for a range of variables, such as economic, health, and family status, for middle and older generations. The data facilitates an international comparison and offers international community data sets for scientific investigation of Japan's experience with aging.

In this study, we explore Japan's LTCI program to extract lessons from ten years of implementation, which is informative for other countries that are also facing rapid aging of their population. Section 2 provides an overview and discusses the unique features of Japan's LTC program. Section 3 examines development and future projections for LTCI costs, focusing on the validity of the aforementioned assumptions. Section 4 reviews empirical evidence on the LTCI program using micro-level data. Section 5 discusses policy debates on reforms for the LTCI program and presents some suggestive evidence from JSTAR. Section 6 concludes.

## **2. Overview of the public LTCI program in Japan<sup>7</sup>**

The public LTCI program was implemented in Japan in 2000. The motivation for the program was the rapidly increasing medical expenditures for frail elderly people since the 1970s and the shrinking capacity for families to provide informal care. These factors have resulted in a widespread view of elder care as a national responsibility under the direction of the central government (Mitchell et al., 2006; Shimizutani, 2006).

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<sup>6</sup> The Japanese Study on Aging and Retirement (JSTAR) is a sister to the following: the Health and Retirement Study (HRS), English Longitudinal Survey on Ageing (ELSA), and the Survey on Health, Ageing, and Retirement in Europe (SHARE).

<sup>7</sup> This section updates some papers the author worked on either collaboratively or independently: Shimizutani and Noguchi (2004); Mitchell, Piggott, and Shimizutani (2006); and Shimizutani (2006). Recent developments on LTC insurance are stated in the Ministry of Health, Labour and Welfare (MHLW) (2010; in Japanese) and Tamiya et al. (2011; in English).

## **(1) Pre-history of the public LTCI program**

Japan's mandatory health care system was established in 1961.<sup>8</sup> The health care system provides universal medical coverage linked to jobs or regions of residency through employers or municipalities. In company-based plans, the program is financed by premiums shared half by employers and half by employees. In community-based plans that cover the self-employed, retirees, and the rest of the local population, half is financed by premiums paid by the insured and the remainder is paid by contributions from the general tax fund. The government sets the national fee schedule (including drug fees) that applies to all providers. Along with establishing the health care system, the government started to formulate its welfare policy for the elderly in the 1960s and committed to partial public financing for nursing homes and home helpers in 1963, although the target was limited to elderly people with lower incomes who received family assistance.

In the 1970s, medical expenditures for elderly people rapidly expanded after the 1973 reform introduced a universal exemption from co-payments for people aged 70 years and older, but the welfare program for free long-term care was limited to selective households. The reform resulted in an enormous number of "social hospitalizations (admissions)," even though they did not necessarily need medical treatment but long-term care in hospitals.<sup>9</sup> In the 1980s, the government changed the policy to mitigate the expanding medical expenditures for the elderly, and in 1983, abolished free medical services for those aged 70 years and older.

In 1989, the government committed to ten years of reform of the welfare program for the elderly, called the "Gold Plan" (implemented in 1990), which was revised again in 1994 (the "New Gold Plan"). The reforms expanded the coverage of the long-term welfare program from only covering poor and living alone, frail elderly people to all those 70 years and older, in order to alleviate national anxiety about the increasing LTC burden. In addition, the

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<sup>8</sup> The pre-history of the public LTC program is also described in detail in Mitchell et al. (2006) and the MHLW (2010).

<sup>9</sup> Campbell and Ikegami (2000) state that half of all hospital beds were occupied by older patients and more than one-third were occupied by patients hospitalized for more than one year.

reforms encouraged socially hospitalized patients to use LTC services through an increased capacity in nursing homes, day-care centers, and at-home care to reduce medical expenditures.<sup>10</sup> These new directives were clear under the “New Gold Plan” that set standardized protocols for long-term care services. Those reforms developed into the public LTCI program, which was enacted in 1997 and became effective in April 2000.

## **(2) Purpose of the public LTCI program**

The ultimate purpose stated in the LTCI Act is to help individuals in need of LTC “to maintain dignity and an independent daily life routine according to each person’s level of abilities.” To do so, the government set up three goals when it established the LTCI program.<sup>11</sup>

The first goal is “[t]o establish a system which responds to society’s major concern about aging, the care problem, whereby citizens can be assured that they will receive care and be supported by society as a whole.” The government acknowledged that a “social support system for long-term care is indispensable” and that the responsibility of care, which has traditionally been borne by women, was shifting from the family to the government. The rising elderly care burden imposed on families was also greater in intensity longer in duration of caregiving. In addition, most of the caregivers themselves were elderly and an increasing number of them were working women.<sup>12</sup> Under those circumstances, the government reached a formal position that “the introduction of LTC insurance seems to be publicly supported...to build a stable system in which the relationship between benefits and costs is made clear.” In other words, a social insurance program was needed to make the relationship between

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<sup>10</sup> At the same time, a series of amendments to the Hospital Service Law (Iryo ho) tackled a reduction in “social hospitalizations.” The law was initiated in 1985 to regulate the distribution of the number of beds available, designating beds for chronic care for the first time in 1992 and acute and chronic care beds in 1997 and 2000.

<sup>11</sup> We quote the literal statement of the introduction provided by the government in English (MHLW, 2002). This document is still available on the web as of May 8th, 2013, though it has not been updated since 2002.

<sup>12</sup> In the pre-reform period, one of every two bedridden persons was bedridden for three years or more, more than half of the caregivers were 60 years or older, and the proportion of elderly persons living with their children declined to about 50% (MHLW, 2002).



premiums paid and benefits received more transparent. This point is covered in detail when discussing the third goal.

The second goal is “[e]fficient delivery of user-centered, quality long-term care services.” The government aims to “[o]rganize a system so that users can use services of their choice” and “[p]rovide necessary welfare services and health and medical care services in a comprehensive and unified manner to persons requiring long-term care.” Put differently, the new system sought to encourage the provision of comprehensive services with multiple choices, in contrast to the pre-reform system with its vertically divided system of health, medical, and welfare services that each operated independent of the others (Mitchell et al., 2006).

To meet this goal, the government promotes “the participation of a variety of independent enterprises such as people in private enterprises, agricultural cooperatives and citizens’ non-profit organizations, and provide[s] service that is not uniform, but diverse and efficient.” The essence of the goal is to introduce a market-oriented mechanism, in contrast with the former tax-financed “distribution system.” In the old system, long-term care was authorized by welfare policy, assigning care recipients in low-income groups to specific services and providers. High-income groups lived in paid, assisted-living homes and paid for all services out of pockets. While the providers of LTC services were restricted to non-profit entities before FY2000, for-profit organizations have been entitled to operate in the at-home care services market since FY2000.

The third goal is to “[s]eparate long-term care from medical care insurance and establish a system as a first step towards revising the structure of social security.” This goal was adopted to reduce the number of social hospitalizations of the elderly who were hospitalized simply due to the lack of viable alternatives. By splitting long-term care and medical coverage, the government hoped to reduce medical care services for the elderly, which remains more costly than welfare services.

Under the new system, older policy holders “bear the cost of premiums where possible” and pay “a fixed rate 10 percent charge for long-term care services” that are “not covered by medical care insurance.” The common co-payment was applied regardless of income level so that middle- and high-income people could use LTC services at a lower cost than before. Moreover, the government recognized that “benefit requirements, which are fair nationwide, in accordance with the required care certification standards for benefits” should be confirmed to assure that eligibility was uniformly enforced throughout Japan.

The emphasis on the goals of the LTCI program has been fine-tuned after a decade of implementation. MHLW (2010) now states that the three purposes are (1) support for the independence of the elderly, (2) providing user-centered choices of services, and (3) transparent relationships between premiums and benefits under this social insurance program. On closer examination, we see that the first goal has shifted its emphasis away from reducing the family care burden to supporting independent living for the elderly. This shift is a clear response to the changes in demographics and family structure in Japan.

### **(3) Features of the public LTCI program**

This section is an overview of the finance and benefit structure of the public LTCI program. The basic goal of the program is to provide citizens with equitable access to long-term care. The overall organizational framework (eligibility, price setting, content of services, etc.) is centrally determined by the government, and therefore, in theory, should be the same across the country. However, in reality, insurance premiums do differ across insurers (municipalities). Thus, this feature of the program remains “decentralized yet centralized” as described in Mitchell et al. (2006).

#### **(A) Insurers and the insured**

The program insurers are municipalities (city, town, and villages). Currently, in Japan, there are about 1,700 municipalities, but some of them make regional alliances and agree to act as a single insurance carrier. The participation in the program is mandatory. The insured

persons are divided into two categories according to age: Category 1, individuals aged 65 and older (28.3 million people as of April 2009), and Category 2, individuals aged 40–64 (42.4 million people as of April 2009). In principle, insured persons in Category 1 are eligible for LTC services through the public insurance program once they have been certified (described below). People in the second category are eligible if they suffer from age-related health disabilities.

### **(B) Financing and premiums**

Japan's public LTCI program is operated as a pay-as-you-go program (Mitchell et al., 2006). The program is financed half by premiums levied on insured persons and half by contributions from the general tax revenue (MHLW, 2002, 2010). Premiums from individuals aged 65 and older (Category 1) covered 20% of the premiums and individuals aged 40–64 (Category 2) covered 30% of the annual program budget (subtracting co-payments from total costs) for the 2009–2011 period. The premiums from the insured persons in Category 1 are deducted from their pension income by each municipality (city, town, and village), while premiums from the insured persons in Category 2 are collected with the premiums for mandatory medical insurance and collected premiums are pooled nationwide. The remainder of the budget is paid by contribution from the central government (25.0%). Five percent is designated as “adjustment transfer” to mitigate disparity in fiscal conditions among the insurers: prefectures (12.5%) and municipalities (12.5%).<sup>13</sup> So far, individuals aged 40 and younger are not insured by the public insurance program and do not pay premium taxes in the LTCI program.

The premium rates are revised every three years to maintain fiscal balance over each period, depending on each municipality's projection of expenditures for LTC over the next period in their LTCI plans. The average monthly “basic” premium was 2,911 yen (FY2000–FY2002) and increased to 3,293 yen (FY2003–FY2005), 4,090 yen (FY2006–FY2008), and

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<sup>13</sup> The shares of the premiums for Categories 1 and 2 depend on the relative population ratio. In the case of institutional care, 20.0% is picked by the government and 17.5% by prefectures.

4,160 yen (FY2009–FY2011). LTCI premiums are means tested and categorized into six levels. For example, the premium is cut in half for individuals on public assistance or whose income level is below the minimum taxable level with an annual income of less than 0.8 million yen. For individuals whose taxable income exceeds 2 million yen, the premium rate is 1.5 times the basic premium amount. The premiums also vary across municipalities. While 65.3% of the insurers set their premiums between 3,501 yen and 4,500 yen (FY2009–FY2011), five municipalities set their premiums below 2,500 yen and 13 municipalities set them to greater than 5,501 yen, producing a substantial gap of 3,500 yen per month between the highest and lowest premium rates.<sup>14</sup>

### **(C) Certification and care level**

When individuals aged 65 and older (Category 1) suffer from failing health conditions and require nursing care or support, they are not automatically eligible to use LTCI. They need to be certified to receive services. To obtain LTCI certification, they apply to the municipality where the insurer is based. Eligibility is nationally uniform and objectively assessed by information on physical and mental health and is not means tested regardless of income or assets. Decisions are made within 30 days of application on the basis of a computer-based evaluation of a 74-item questionnaire on activities of daily living and are preliminarily categorized into one of seven levels (described below). The care level is reviewed by referring to a report from the applicant's family physician and finalized by an LTCI certification board, comprising medical, hygiene, and welfare experts (Tamiya et al., 2011). Eligibility is re-evaluated every two years or every six months for those who need lower levels of care, or as requested in the event of further decline in health.

Once the applicant is certified as being in need of LTC and eligible for long-term care or support, a specific “care level” is assigned linking the necessity of support and the service

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<sup>14</sup> The lowest premium is 2,265 yen (Hinoemata mura in Fukushima Prefecture and Shichiso cho in Gifu Prefecture) and the highest is 5,770 yen (Towada city in Aomori prefecture and Emukae cho in Nagasaki Prefecture).

allowance to be received.<sup>15</sup> The seven care-level categories are further divided into two types: Care level 1–5 are for increasingly disabled individuals in need of LTC to help with basic activities of daily living (ADL). The “Support Required” levels 1 and 2 are for individuals who can live independently, but are afraid of being in need of care and require assistance for instrumental activities of daily living (IADL).

The two types of certification differ in the type and amount of LTC services that are made available. Individuals in Care level 1–5 are eligible to use “LTCI benefits” including institutional care services, at-home care services, and community-based services, whose provision is based on a “care plan.” A care plan is worked out by a certified care manager whom the client selects. The care manager sets the weekly schedule of care services. Individuals in Support Required level 1 or 2 are eligible to use “preventive benefits” (described below), which are based on a “care plan for prevention.” If an applicant is not certified to use LTC services, but is aged 65 and older and judged to be at the risk of becoming in need of care in future, he/she is eligible for care prevention programs (programs to improve physical or oral functions, nutritional guidance, etc), which are supported by each insurer.

#### **(D) Co-payment and ceiling**

LTC users must expend out-of-pocket amounts to receive LTC services. A certified person can use LTC services with a 10% co-payment (90% is paid by insurance) for each insured service. The fee schedule depends on the service (fee for service) for either at-home care or by type of institution for nursing care. Also, each level sets the monthly ceiling amount of services that can be purchased as benefits with a 10% co-payment, ranging from 4,970 units (Support level 1) to 35,830 units (Care level 5) (see “explanation of a unit” later in this section). The ceiling depends only on care levels, not income or assets. In addition, institutional care users are responsible for “hotel costs,” which include living costs (water,

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<sup>15</sup> Initially, there were six categories (Care level 1–5 and “Support required”). The classification was re-organized and added along with the introduction of preventive care in 2006.

electricity, and gas) and a portion of food or cooking costs. Those costs are means tested and capped for low-income individuals.<sup>16</sup> After spending up to their ceiling amount, a client can use LTC services but is responsible for 100% of any additional costs until hitting a stop-loss threshold called the “high-cost long-term care service limit.” Above that threshold, additional expenses incurred by the client are entirely covered by insurance. This stop-loss threshold is means tested and reduced for low-income groups.<sup>17</sup> In reality, most clients use only what they need and do not typically use up to the limit. Most of them use 40–60% of the ceilings (Tamiya et al., 2011).

### **(E) Type of services provided**

Under the program, various services are provided irrespective of income level or family type. Note that only services are provided and not cash allowances. The services are explicitly divided into two categories: LTC benefits and prevention benefits. The type of LTC benefits is further divided into three categories: at-home care services (in-home services), institutional care service (services at facilities), and community-based services. At-home care includes

- home-help services (housekeeping and personal care)
- home-visiting nurse
- home-visit bathing
- home-visit rehabilitation
- elderly care provided in for-profit private homes
- welfare device leasing
- at-home medical care management counseling
- allowances for the purchase of welfare devices and for-home renovations that are received at home

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<sup>16</sup> MHLW (2010) shows that the standard cost of living was 52,000 yen. A client whose annual income was more than 2.11 million yen must pay all service amounts, but people on public assistance pay only 10,000 yen (42,000 yen is subsidized by “complementary benefits”).

<sup>17</sup> The upper limit for the monthly co-payment is 37,000 yen for individuals whose income exceeds the minimum taxable income, which is lowered to 15,000 yen for individuals on public assistance.

- day services (care with rehabilitation)
- short-stay care (service) received outside the home.

Institutional care services are classified into three types of nursing homes: long-term care welfare facilities for the elderly (special nursing homes), where most of the clients reside for the remainder of their lifetime; long-term care health facilities for the elderly, which are designed for rehabilitation to smoothly transition from the hospital to the home; and long-term care medical facilities for the elderly (chronic-care hospitals). Medical care, per se, is not included in the LTCI program, but instead is offered under the national healthcare system.<sup>18</sup>

Community-based services were introduced in the 2006 reform and include home visits at night, day care for dementia patients, “small-sized and multi-function” at-home care, dementia group homes, care provision at specific types of institutions such as private nursing homes, and long-term welfare institutions.

**(F) Fee schedule and providers**

The government sets a charge for each type of LTC service covered by the insurance and revises the fees every three years. For at-home care services, each type of LTC service is assigned a specific number of “units” (e.g., a home visit for the provision of physical help for 30–60 minutes is equivalent to 402 units during the day). A unit is equal to 10 yen with some regional variations to account for wage differentials for service providers. The fee schedule for at-home care does not depend on the care level of a client. The number of units assigned to institutional care depends on the type of institution and each client’s care level.

Providers include local governments, semi-public welfare corporations, non-profit organizations, hospitals, and for-profit companies, all of which are licensed and supervised by prefectural government.<sup>19</sup> For-profit companies are not allowed to do business in institutional

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<sup>18</sup> A client living in an institution other than the three types and receiving long-term care services is counted as an at-home care user.

<sup>19</sup> Since 2006, municipalities have been in charge of accreditation of service providers for community-based services.

care. Since the fee schedule for each service is centrally set by the government, providers cannot set the price on their own, but are expected to compete on the quality of care.

**(G)“Decentralized yet centralized” approach**

Japan’s LTCI program is characterized by what might be labeled a “decentralized yet centralized” approach (Mitchell et al., 2006, 2008). An unusual aspect of the Japanese system is that some aspects are highly centralized in the overall framework and price and benefits parameters, while others are dependent on local decision making for service use.

The decentralized elements include that insurer municipalities and insurance premiums vary and are collected by municipality. The types of care a client is eligible to use are determined by a care manager. The program combines means-tested insurance premiums with a flat 10-percent co-payment rate. All care providers are approved by prefectures and contract with municipalities. At-home care services are supplied by various providers including for-profits. On the other hand, the centralized elements are eligibility certification process, types of services, and their prices and co-payment, which are determined by the central government and uniformly implemented.

A consequence of this “decentralized yet centralized” approach is the emergence of regional disparities in both provision and capacity of LTC, which has put pressure on the current program’s centralized framework. Indeed, age structure, financial conditions, and capacity to provide formal care, either institutional or at home, or family care varies per municipality. Mitchell et al. (2006) reveal substantial disparities across prefectures in the old dependency ratio, institutional care capacity, and long-term care use rates.

Two additional studies developed and empirically examined the regional gaps. Mitchell et al. (2008) examine prefectural data for a longer period (FY2001–FY2006), and in more recent years, find widening disparity in the demographic of elderly population and the entitlement and use rate of LTC. They conclude that regional disparities in entitlement and care use persist and are likely to grow. Shimizutani and Inakura (2007) observe that differences in the



certification process and in the use of such services are emerging on the basis of the financial conditions of municipalities that act as insurers. While the care levels are determined by objective criteria, certification board members are chosen by the insurers, giving rise to the possibility of informal pressure that may result in restrictive certification and care use. Using municipality-level data, they empirically show that growth in the certification rate or the number of care users is significantly lower in insurers with financial difficulties than in municipalities or insurers without such difficulties.

### **3. LTC cost development and projection**

In this section, we quantitatively review the first ten years of the LTCI implementation and explore LTCI cost projections, focusing on official projections.

#### **(1) Development of LTCI costs**

The total LTCI costs (*Kaigo hi*), including co-payments by clients, were 3.97 trillion yen in FY2000 in the first year of the LTCI and increased to 8.37 trillion yen by FY2011, 2.1 times the amount in FY2000 (Figure 3). Proportionally, the LTCI benefit expenses (*Kyufu hi*), excluding co-payments by clients from total costs, also increased from 3.24 trillion yen to 7.26 trillion yen in FY2010. If we separate the LTCI costs into the types of services, we observe different patterns among them.

Over the first ten years, institutional care services accounted for 67.0% of the total costs in FY2000, increased by 27.9% from 2.66 trillion yen to 3.40 trillion yen between FY2000 and FY2011, and the share decreased to 40.7% in FY2011. Community-based services which was introduced in FY2006 in the full specification, increased from 0.02 trillion yen to 0.80 trillion yen between FY2000 and FY2011 and still account for a small percentage of the overall costs. The increase in LTCI costs during the decade is largely accounted for by the increase in at-home care services, which was 1.29 trillion yen in FY2001 and 4.16 trillion yen in FY2011, and proportionally is now 49.8% of the total costs, exceeding that of institutional care.

## **(2) Developments on the number of the insured and the certification rate**

The number of the insured in Category 1 increased by 29.8% from 22.4 million persons in FY2000 to 29.1 million persons in FY2011 (Figure 4). If we divide them into age groups, the proportion of the insured aged 75 years and older increased from 41.2% to 49.1% between FY2000 and FY2011, reflecting the progress of population aging. The certification rate, defined as the number of certified users out of the number of the insured in Category 1 was 11.0% in FY2000 and increased to around 16.0% in the mid-2000s and leveled off afterwards.

If we examine the certification rate by care level, the surge in the first half of 2000s was accounted for by an increase in the certification rate for lower care levels (Care level 2 or lower) rather than for higher care levels. Combining the two facts, during the first decade, the number of the insured increased and the proportion of the insureds aged 75 and older increased their share as the population aged. The certification rate largely increased in the lower care levels in the first half of the decade, but leveled off in the second.

## **(3) Development of the number of the certified and service users**

The numbers of the certified and the service users was 2.56 million and 1.84 million in FY2000, respectively. These figures increased to 5.06 million and 4.12 million in FY2010 (Figure 5). When the number of the certified is decomposed by care level, the highest increase occurs in the “Support Required” level, although we see a discontinuity between FY2005 and FY2006 due to the reclassification of care levels under the reform. The number of the certified in the Support Required category increased from 0.3 to 1.3 million between FY2001 and FY2010. The growth rates in the figures for the other care levels are much smaller. When the number of users is broken down by type of care, the increase is largely accounted for by at-home care, which grew 2.5 times from 1.24 million to 3.02 million between FY2000 and FY2010. This figure increased slightly from 0.60 and 0.84 million for institutional care users between FY2000 and FY2010. In sum, the number of the certified and the service users

increased in at-home care recipients with lower care levels, which contributed to the overall increase in the number of users, resulting in the increase in total LTCI costs.

#### **(4) LTCI cost projections**

Now, we turn to LTCI cost projections. All the projections show that LTC costs will increase as population aging progresses. This is a simple extrapolation with common methodology that divides LTCI costs in the future into two parts: the number of LTCI users and LTCI costs per person. The first task is to estimate the number of LTCI users in the future. The first step of that task is to estimate the total numbers of elderly people who will be alive in a target year in the future. In most cases, the official population projections published by the National Institute for Population and Social Security is used, which provides information on the number of persons in each age group by gender projected to still be alive in the target year (i.e., 2025). The second step is to estimate the number of disaggregated types of LTC users (i.e., the number of users to be given Care level 5 or the number of people projected to be living in nursing homes in 2025).<sup>20</sup> The disaggregated levels depend on the purpose for a projection. The simplest method is to apply the current proportion of certified clients and service users in the benchmark year to population projections in the future, assuming that the composition of types of LTC users remains unchanged. The third step is to “assume” the change in the number of users in each type depending on some scenarios or reforms. For example, the number of older people hospitalized in chronic-care hospitals is assumed to be decreasing at a certain rate.

The next task is to estimate LTC costs per capita. In most cases, the growth of LTC costs in the future are computed by a weighted average of wage growth and inflation rates, both of which are again assumed (often mechanically). As for the weight for labor costs and non-labor costs, these are assumed to be identical for each type of LTC, and the growth of LTC costs in the future is assumed to be identical across each type of user. Following these

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<sup>20</sup> The detailed estimation procedure for official projections is not publicly available. An exception is the National Council on Social Security (2006), which provides the raw data used for their projections.

assumptions, the last task is to multiply the estimated number of LTC users by their LTC costs for the projection year and to sum them up to compute the estimated LTC costs in the future.

In what follows, we review some major official projections. A representative and regular official LTC projection is published by the MHLW, “Projections of social security benefits and burdens” (Shakai Hosho Kyufu to Futan no Mitooshi) (Figure 6). According to the last published projections (MHLW, 2006), the estimated LTCI benefit costs (excluding co-payments paid by users) will be 10–12 trillion yen (2.3–2.7% of national income) in FY2015 and 17–20 trillion yen (3.1–3.7% of national income) in FY2025, when the number of the elderly people is expected to reach its maximum level. The corresponding figures in the 2000 version (MHLW, 2002) were 8–10 trillion yen (2% of national income) in FY2010 and 20–21 trillion yen (3 –3 1/2% of national income) in FY2025. In both projections, assumptions for some economic variables are stated, such as the growth of national income, wage growth, and inflation rates, but no concrete or detailed methodology is revealed.<sup>21</sup> In general, the amount of LTCI benefit expenses is smaller and the share of LTCI benefit expenses of the national income is larger in more recent projections.

There are two other projections released by the government. MHLW (2003) estimated that the LTCI benefit expenses (excluding co-payments by clients) will be 12 trillion yen (2.5% of national income) in FY2015 and approximately 20 trillion yen (3.5% of national income) in FY2025. The National Council on Social Security (2006), the last official long-term projection of LTCI costs under the Fukuda administration, provided some alternative projections for FY2025 on the basis of four scenarios (Figure 7). The LTCI costs (including

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<sup>21</sup> MHLW (2006) states, “LTCI costs are computed by considering service use in the future, aging, population growth, etc., using the FY 2006 budget as the baseline.”

co-payments by clients) are estimated to reach 19–24 trillion yen in 2025 (3.2–4.1% of GDP), about three times the amount in the base year (about 7 trillion yen in 2007).<sup>22</sup>

In sum, there is a consensus that LTCI costs will increase to a substantial level, about 3% of the national income by 2025 with some small variations. This is not surprising as the methodology is quite similar. First, the projection strategy is tied to a “typical person approach.” Even if disaggregated in detail, this approach cannot fully consider diversity in economic, health, and family status among elderly people and those in need of LTC. For example, the availability of family care (informal care), a close substitute for formal care, is ignored; this may lead to serious biases in the projections. Second, incentive mechanisms are not considered in the projections, which is evident as it separately estimates the number of users and LTC cost per person. While several scenarios were examined, the price mechanism does not work with the current way projections are made, and the effectiveness of the reform is not validated. Third, the projection implicitly relies on stationary assumptions over generations. For example, future generations might be healthier than the current elderly generations and may be less in need of LTC care. However, they may suffer from a smaller capacity for family care (informal care) and a larger incidence of dementia. In most cases, differences among cohorts are not fully considered. In addition, these mechanical projections do not take into account possible technological breakthroughs or improvements in rehabilitation and recovery support from illness and injury.

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<sup>22</sup> <http://www.kantei.go.jp/jp/singi/syakaihosyoukokuminkaigi/>. The council was established under the Prime Minister’s office. The four scenarios used are as follows:

- Scenario A: 19 trillion yen (3.2% of national income). Mechanical computation without any medical reforms and LTC provision assuming the current use by age and type of service is unchanged.
- Scenario B1: 23 trillion yen (4.0% of national income). Splitting functions for acute, chronic, and recovery patients in general hospitals; allocating appropriate equipment and manpower; and providing more at-home care so that a client with higher care-level needs is able to live in the region.
- Scenario B2: 24 trillion yen (4.1% of national income). Advancing the reform in B1 to the level of developed countries by strengthening regional care systems.
- Scenario B3: 24 trillion yen (4.1% of national income). Advancing the reform in B1 and emphasizing more restrictive separation of functions for acute patients.

The current official projections simply do not fully consider diversity, incentive mechanisms among the elderly, and possible differences among cohorts. These aspects require micro-level analyses.

#### **4. Micro evidence on the LTCI program**

In this section, we review micro-level evidence on the development of Japan's LTCI program, evaluating the achievement of the program's objectives as set by the central government.<sup>23</sup>

The first goal was to expand the supply of care services and "socialize" the family care burden, thereby helping older people to lead more independent lives and relieve the burdens of family caregivers. Tamiya et al. (2011)<sup>24</sup> provides the sharp increase in the use of formal care services and the expansion of LTCI use by higher income individuals than by middle- and low-income individuals.

There are several studies on the effect of formal LTC services on various health outcome measures in terms of mortality, functional status, institutionalization, care-needs level, nutritional status, and care burden. The results are mixed, except for some seemingly positive effects of day care and home-based care (Tamiya et al., 2011). The study argues that an appropriate goal for the LTCI program may not be improvement, but maintenance of health and functional status for frail older people.

Another aspect of this goal is the effect on caregivers, in particular, the care burden and female labor force participation. Despite success in the expansion of the care supply, the effects on socializing family care are mixed. Noguchi and Shimizutani (2005) show that about 20% of households with a care recipient provide family care for more than eight hours per day

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<sup>23</sup> Some empirical articles on regional disparities are reviewed at the end of Section 2.

<sup>24</sup> For all empirical analyses quoted in this section, Tamiya et al. (2011) use micro-level data from the Comprehensive Survey of People's Living Conditions, a large and nationally representative, repeated cross-sectional survey, in 1998 and 2004. It reports some quantitative evaluations of the impact of LTCI using a difference-in-difference estimation. Note that the evidence provided by the study has limitations because the data is not longitudinal.

and 10% provided home care for more than twelve hours after two and half years from the introduction of the family member with the care need. They explore causes for the remaining care burden at home and find that a portion is accounted for by strategic bequest motives. Shimizutani et al. (2008) find a large and positive effect on the female labor supply using panel data. The LTCI program enhanced the probability of being employed by 30–60%, working days per week by 40–60%, and working hours per day by 50–70%.

In health and medical literature, many studies have investigated stress, morale, and care burden among family caregivers; however, they showed mixed results except for the evidence of positive effects of formal service use on physical burdens and a significant reduction in the emotional burdens of caregivers. Tamiya et al. (2011) find no significant effect on the self-rated health status of caregivers, but find that the average time spent caring for a family member significantly declined after FY2000 by 0.81 hours per day and time spent on other activities increased by 0.67 hours per day. What is new in their study is that the effect differs across income groups in that the positive effect on caregivers is found only in high- and middle-income groups. Also, there is a significantly higher probability of being employed for the high-income group (slightly higher for the remaining groups) and weekly working hours are higher by 4.6 hours for the high-income group, but smaller for the remaining groups.

The second goal of the LTCI program is the efficient provision of user-centered quality LTC services. Long waiting lines still exist for institutional services, but care users have not faced the shortage of at-home care supplies. The deregulation policy to allow for-profits into the markets seems to be successful. Noguchi and Shimizutani (2005) report that 40% of the home-care providers are for-profit companies and better informed households are likely to choose care from for-profit providers. A bias toward non-profits, as the contract failure hypothesis predict, is not observed. Shimizutani and Suzuki (2007) also explore quality differences between for-profit versus the public sector and not-for-profit home-care.

Their study confirmed that the quality of services provided by newer providers, most of them for-profits, is not worse than that provided by non-profits.

Noguchi and Shimizutani (2007) report a non-profit wage premium in the LTC labor market and discover that the non-profit providers are more costly. Shimizutani and Suzuki (2007) estimate a quality-adjusted cost-function and find that for-profits were 40% more efficient than other types of providers. These findings confirm that competition stimulated by the deregulation policy contributes to improving the quality and efficiency of the market for at-home LTC services.

The third goal is to reduce the level of social hospitalizations by the program, providing an appropriate division of medical and LTC coverage in an integrated way. This strategy is also supposed to reduce total costs. To the best of our knowledge, empirical studies in Japan remain silent on these topics.<sup>25</sup> An exception is Hashimoto et al. (2010) that examine medical and LTC service use in a prefecture and show that substituting LTC for medical care for end-of-life care may not automatically lead to savings in resource use.

Among a smaller number of studies related to this aspect, Noguchi and Shimizutani (2011) estimate price and income elasticity for institutional care. They report that at-home care appears to be a reasonable substitute for welfare institutional care, and relatively less-ill elderly patients tend to be re-hospitalized if they lack family members with whom they live. Another issue is how to prevent suppliers from taking advantage of information asymmetry between supplier and patients and create unnecessary needs. Noguchi and Shimizutani (2009) explore supplier-induced demand in the LTC market and find little evidence of suppliers committing this type of action. On the other hand, allegations that consumers would buy unnecessary care services simply because the co-payment was so low (10%) has been rarely examined in Japan's LTC market.

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<sup>25</sup> Campbell and Ikegami (2000) illustrate that the number of socially hospitalized patients remained at a high level with more than 500,000 people aged 65 years or older living in hospitals.



## **5. Recent debates on LTCI reforms with suggestive evidence from JSTAR**

During the past decade, Japan's LTCI program has been regularly reviewed and has undergone several reforms. The reforms were motivated by the rapid increase in the use of long-term care services, especially at-home care services. In FY2003, the fee schedule and the contents of long-term care service provisions were revised for the first time. The 2005 reform defined three more goals: construction of an active super-aging society, program sustainability, and aggregation of social security.

This reform gave five directions under those goals.

- (1) conversion to a prevention-oriented system
- (2) revision in the benefits of institutional care (collection of living costs and consideration to individuals in lower income groups)
- (3) establishment of a new service-providing system (community-based services and regional comprehensive support centers)
- (4) improvement of the quality of services (disclosures and revisions to care management)
- (5) revision to premiums for people aged 65 and older and strengthen the function of insurers. (MHLW, 2010).

At the beginning of FY2006, the “long-term care prevention allowance” was introduced to retard the rapid growth of at-home care services. The new menu included an allowance for services, such as strength training, aimed at preventing the need for long-term care. At the same time, community-based services were also introduced (see Section 2) and the fee schedule was revised for the second time. “Hotel costs” (living expenses such as expenditures for food and accommodations) were excluded from insurance coverage to be borne by clients as of October 2005 to balance at-home and institutional care.

In FY2008 (effective May 2009), the second largest reform of the program was implemented featuring a re-organization of operations management and the amount of

services supplied. The main purpose of the 2008 reform was to increase the fee schedule to compensate LTC workers who are under-supplied. According to official wage census statistics, the average wage for general workers in the LTC industry is generally lower than that for other industries. Similarly, wages for home helpers and caregivers at welfare institutions are lower than those for other occupations in medical and welfare industries, although the figures are not adjusted for worker age and years of experience.<sup>26</sup>

Finally, we discuss five importance policy issues to make the LTCI program more effective and emphasize the importance of accumulating empirical evidence when designing new directions for future reforms.

### **(1) Does community-based care work?**

One of the consistent goals of Japan's LTCI program is to mitigate medical expenditures by shifting from medical care to LTC services use, in particular for "socially hospitalized" patients who have been encouraged to transition from hospitals to using LTC services. It seems that the LTCI program has not succeeded in reducing the numbers of socially hospitalized patients. There has been little evidence to support a clear shift from medical to LTC services. Originally, the government set a target to abandon long-term care medical facilities for the elderly (chronic-care hospitals) by 2012, but extended the deadline to 2018 while the capacity of institutional LTC has not been expanded due to tight budget constraints.

The government has placed priority on the role of at-home care causing the use of LTC services to substantially expand. This type of care now accounts for more than half of LTC costs. As a result, the government has come to expect regions to support LTC capacity. This expectation is apparent in the introduction of community-based LTC, which is expected to complement formal care provisions.

In addition to transitioning elderly people from medical to LTC services, there remain two other pressures on community-based services. One is the change in family structure,

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<sup>26</sup> The average annual wage for social insurance, social welfare, or LTCI operation is 2.42 million yen, which is lower than the average 3.29 million yen for all industries.

especially the enormous increase in single-member households. The rapid increase in single households has been accelerated by the large number of people who never married. Since it is difficult to expect family members to care for single members as they age, the greater community has been designated as the substitute for family care.

The other pressure is the increase in dementia patients. For this segment of patients, family members alone cannot provide sufficient care. Community care is supposed to provide care for these patients in the area that he/she has been living for a long time. Recently, a MHLW research project (leader: Takashi Asada, University of Tsukuba) reports that the number of dementia patients among the population aged 65 and older was 4.62 million (15%) and the number of MCI (Mild Cognitive Impairment) patients was about 4 million in 2012.<sup>27</sup> In the United States, Hurd et al. (2013) used the Health and Retirement Study to show dementia among the population older than 70 years was 14.7% in 2010. The monetary cost per person varied between 41,689 and 56,290 US dollars and the total cost for care of dementia patients was estimated between 157 and 215 billion US dollars.

Although theoretically feasible, in practice, previous approaches to reduce the number of people socially hospitalized in their old age does not seem to be working well in Japan. To find a working methodology, we need to examine the reality of the lives of the elderly using micro-data, in order to take into account the substantial diversity in communities and families. Without taking into account individual-level, longitudinal data on various interconnected aspects of economic, health, and family status, Japan will continue to suffer ineffective policies and implementation of its LTCI program.

Fortunately, relevant data has begun to be systematically collected by JSTAR (Japanese Study on Aging and Retirement), a sister of HRS (Health and Retirement Study), ELSA (English Longitudinal Survey on Ageing) and SHARE (Survey on Health, Aging and Retirement in Europe) in the continental Europe, and the 3<sup>rd</sup> wave completed in 2011. For

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<sup>27</sup> <http://www.asahi.com/national/update/0601/TKY201305310615.html> (in Japanese).

JSTAR, the respondents in the baseline are aged 50–75 years and are randomly chosen from some specific municipalities.

The upper section of Figure 8 shows the frequency of contacts respondents had with parents or children. Note the large variation among regions. The most frequent contact was found in the town of Shirakawa, located in a forested rural area. The proportion of respondents living with parents in Shirakawa was close to 60%, but this percentage was only about 15% in Naha in Okinawa, 30% of these respondents reported daily contact with their parents. The proportion of respondents who had contact with their parents less than once a month was 20% in Sendai, again less than that in Shirakawa.

Another large variation was found in the frequency and number of respondents who lived with children (lower section of Figure 8). The proportion of respondents living with children or in daily contact with them exceeded 40% in Sendai and Kanazawa, but was less than 30% in Adachi and Takikawa. Figure 9 shows the location of children who shared housing with respondents aged 70 years and older. Again, we see large disparities in the locations and distances to the respondents' houses. The proportion of elderly respondents living in the same house with children was higher in Kanazawa and lower in Takikawa. It might be possible that children moved to the neighborhoods because a respondent was in need of care, but the results suggest a large gap in the availability of family care across regions.

In addition to family relationships, diversity is also found in health and socioeconomic status. In sum, the recent LTC policy orientation to emphasize community-based care was motivated by factors such as transitioning elders away from medical care to LTC services, a shrinking capacity for family care, and an expected increase in dementia patients. Nevertheless, Japanese communities are diverse and a uniform policy design may not work. The government and researchers should develop more empirical evidence for the “optimal” combinations of various types of LTC services and consider the effects on both care recipients and caregivers in terms of cost-effectiveness.

## **(2) Is LTC preventive care effective?**

LTC preventive care was introduced in FY2006, which was expected to prevent the continued rise in the need for more intense care levels, but the effectiveness has not been seriously examined. The idea is that preventive care will prevent old people from needing LTC, and thus, if effective, reduce LTC costs. The government seems to have placed high priority on preventive policy in both medical and LTC fields, evidenced by the strong encouragement to have annual health exams.

Because it is not easy to evaluate the effects of preventive care and it takes a long time to observe improvements, if any, there is still little supporting evidence for the effect of policy directives to create preventive care services for the elderly. Also, the proportion of older people who are not certified for such care but are eligible to join in preventive care programs remains very small. Obviously, even if LTC preventive care is effective, all beneficiaries will not necessarily take part in preventive LTC services. Whether a person partakes in preventive care may be associated with their socioeconomic status (i.e., income and education levels), which has been clearly observed in the level of taking health examinations (Ichimura et al., 2009). This caveat makes it likely that a beneficiary with a higher income and/or education level is more likely to take preventive care, while someone with a lower income and/or education level is less likely to do so. This bias can cause reduced efficiency for the program and a greater disparity among beneficiaries. Therefore, if preventive care is effective, it is indispensable for the government to create a design that encourages beneficiaries to take preventive care regardless of their socioeconomic status.

## **(3) Is coverage of the LTCI program appropriate?**

It is often discussed that the coverage of the Japanese LTCI program is more generous than similar programs in other countries. As the fiscal concern for the sustainability of the program has become more serious in recent years, the generosity of the program coverage should be reviewed. As explained in the first half of Section 3, a large portion of the increase

in LTCI costs during the first decade of implementation of the LTCI program was accounted for by the large number of clients with lower care-level needs (including Support Required) and by a larger use of at-home care services. From the fiscal perspective, it is tempting to conclude that at-home care services for beneficiaries with lower care needs should be removed from the coverage of the program to cut LTCI cost.<sup>28</sup> However, the coverage issue should not be considered from only the fiscal perspective. Empirical evidence is needed to study the impact it would have on care recipients' health and cognitive functioning, and the impact it could have on caregivers' health and cognitive status and the resulting impacts to the labor supply.

Figure 10 illustrates family type and contact with children by gender for people between the ages of 65 and 75 over the time period of both waves of the JSTAR study. The proportion of single-member households is 5.7% for males and 18.9% for females. There is also a variation in the frequency of contact with children. While 45% of elder females have contact with children more than once a week (including cohabitation); a quarter of them have less frequent contact with children (less than once a month). Given this observation, a uniform reduction of the coverage might not work because care needs depend not only on health status and functionality of care recipients, but also on the availability of family care. Thus, if the coverage is to be reduced or removed, we need to consider the effects on non-fiscal aspects by providing empirical evidence.

There are two possible alternatives for this type of coverage. One is to introduce a cash allowance into the program. While there was a debate on this idea at the introduction of the LTCI program, there have been negative views on the idea mainly from a gender equality angle. In Germany, cash allowances encouraged family care (informal) for the elderly that resulted in a negative impact on the female labor supply. Japan may experience the same

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<sup>28</sup> According to mass media, the MHLW started a discussion to take "Support Required" out of the covered services of the LTCI program because LTC services for Support Required persons do not contribute to independent living (NHK and Yomiuri newspaper on May 5, 2013).

unintentional consequence since family caregivers are traditionally women in Japan. The effect could depend on the size of the cash allowance and the conditions for use, which require empirical evidence, for example, from an experiment with some municipalities.

The other idea is to adjust who accrues coverage. Under the current program, the insureds are 40 years old and older who pay insurance premiums. From a fiscal perspective, one direction would be to expand the coverage by lowering the minimum age. Since most of people under 40 are not entitled to use LTCI services, which are different from medical insurance, this change of the insured would create a new fiscal burden for younger generations. While it may seem that expanding the insured pool to include younger generations is not politically feasible, we need to consider what age is the appropriate age for a person to be insured.

#### **(4) Is market entry promoted more?**

One of the innovative features of the LTCI program is that it allows for-profit providers to enter the at-home care market for the first time. Some papers provide evidence of support for the entry policy (see Section 4). However, for-profit providers are still not allowed to enter the institutional care market. One reason for the prohibition of for-profit providers from this market is the possibility of opportunistic behavior to lower quality of care to make a profit, something non-profit organizations do not have to do.

At-home care expanded during the first ten years of the LTCI program and gained a share in the total LTC. The supply of institutional care has not increased much since 2000. Since there is still a long line of elders waiting to enter an LTC institution, most of the beds at such institutions are occupied and new beds fill immediately, which continues to push up total LTC costs. Thus, the government seems to be reluctant to increase the available capacity for institutional care. Given the circumstances, if a client is not allowed to use institutional care, in most cases, they are forced to choose to live at home and receive at-home care or live in a private, assisted-living home, which is generally expensive.

In addition to the current long waiting list to enter an institution, the shortage will likely be more severe in the future because of the increase in single-resident households. One way to cope with the shortage of institutional care is to allow for-profits to enter the market to increase the capacity. The main issue is how to improve efficiency without lowering the quality of care regardless of the type of provider. Effective quality measures and inspections are necessary to prevent opportunistic behavior. The 2005 reform increased monitoring to improve quality of service. If monitoring proves to be effective to maintain quality of care, the entrance of for-profit providers may contribute to the efficiency of the institutional LTC market. While some evidence suggests that the entrance of for-profits in some LTC markets has been successful, more empirical evidence is needed on the effect of for-profit entry in the institutional care market.

**(5) Does regional disparity continue to widen?**

During the study decade, the pressure of regional disparity on the centralized system has already grown (see Section 3). One way to tackle the gap is to employ stronger measures to secure equity across regions by making it easier for insured people to move about and still retain their coverage. However, this mobility could create a problem for insurers that have weak fiscal conditions. Another idea is to pursue a more decentralized approach where each individual would own a portable LTCI “account,” which could be taken anywhere in Japan, and entitle the holder to long-term care services free from regional disparities. The central government would set up the accounts and the menu of care services. An alternative would be to develop the private LTCI market, which is very small in Japan (Mitchell et al., 2006). Similar to the public pension program, it allows people to combine benefits from public and private insurances, depending on their needs and economic status. This more “market-oriented” approach could also change the role of public insurance, whereby the public sector would be responsible for meeting basic needs and the private program would provide additional services. A reverse mortgage is an example of this concept.



Another area of regional disparity is the difference in regional “social capital.” Figure 11 provides evidence of some indicators of regional characteristics from JSTAR. In the upper section, the proportion of respondents who trust people in the neighborhood is more than 70% in Shirakawa, but less than 50% in Adachi, which is downtown in the center of Tokyo. In the lower section of Figure 11, the proportion of respondents who expect people in the neighborhood to be helpful to others is more than 40% in Shirakawa, but less than a quarter in Adachi. These observations suggest that we need to perform a micro-level examination of the capacity of LTC provision by regions and families. Presumably, the capacity significantly differs across areas within Japan. An investigation has just begun in Japan using JSTAR data to capture a variety of aspects of elderly life in reality.

## **6. Conclusion**

This study reviewed the first ten years of implementation of Japan’s public LTCI program. In particular, we examined flaws in the current “typical old person” paradigm in policy debates and proposed a micro-based approach that considers diversity (heterogeneity), incentive mechanisms, and inter-generational differences. To determine the best approach to LTCI reforms, a dispassionate debate based on empirical evidence and empowered with more intensive research is indispensable.

To be fair, among the limited number of previous empirical studies of the long-term care system in Japan, most were concentrated on the initial phase of the public LTCI program and were interested mainly in the changes before and after its introduction. Now, more than a decade later, the use of LTC services and the surrounding circumstances have also changed. Accumulating empirical research data on recent LTC use with a focus on diversity and incentive mechanisms is indispensable for future policy reform. The good news is that a new investigation has just begun, which is reinforced by the construction of JSTAR. Since JSTAR is a world standard data set comparable to other countries’ data collection, any future

examination or quantitative studies of Japan's experiences with LTC will shed light on the common challenge of coping with an aging population as shared by all countries.

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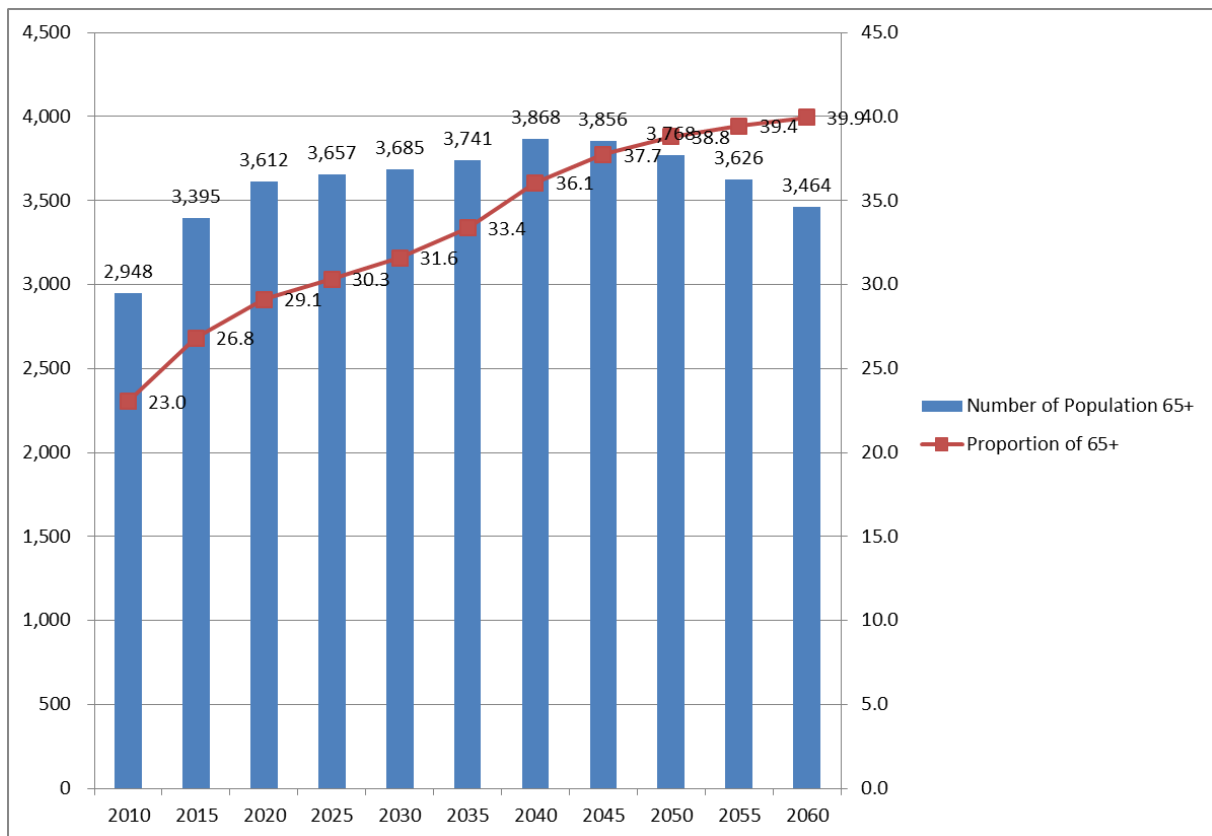
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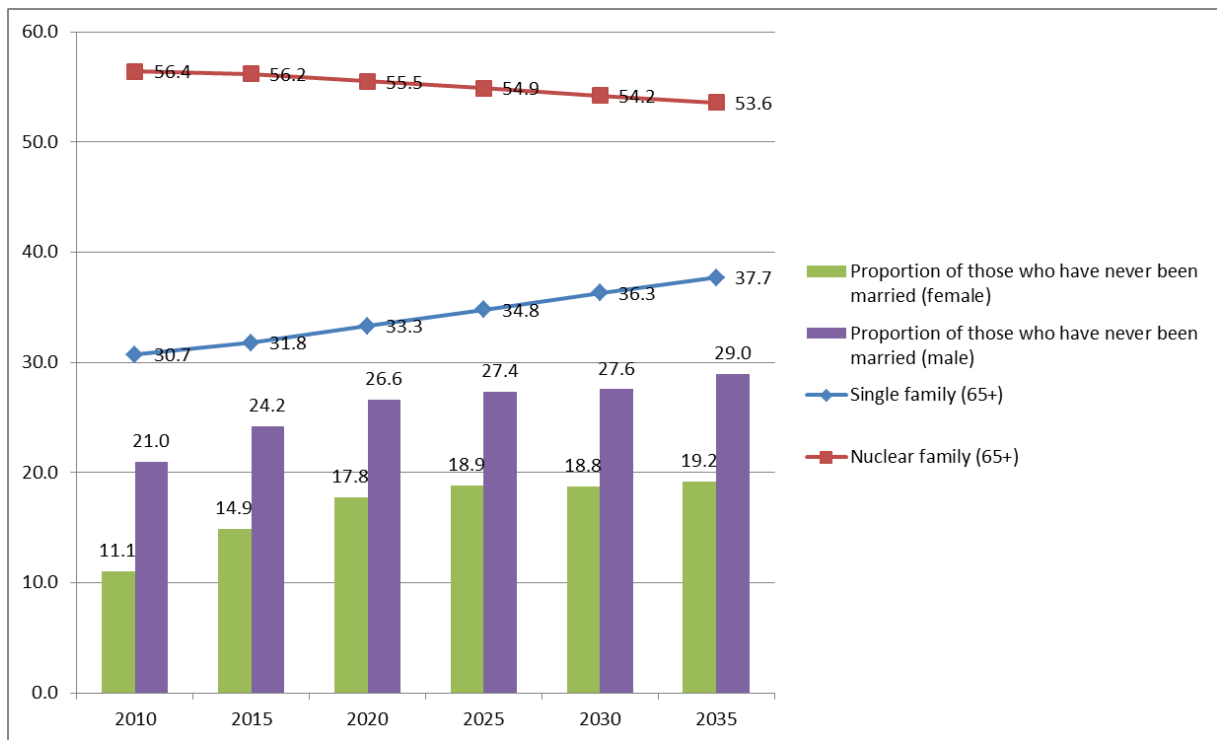
**Figure 1 Population projections for Japan**



*Source:* National Institute of Population and Social Security Research (2012). “Population Projections for Japan (January 2012): 2011 to 2060.”

*Note:* Units are provided in ten thousand persons (number of population 65+) and percent (proportion of 65+).

**Figure 2 Household projections for Japan**

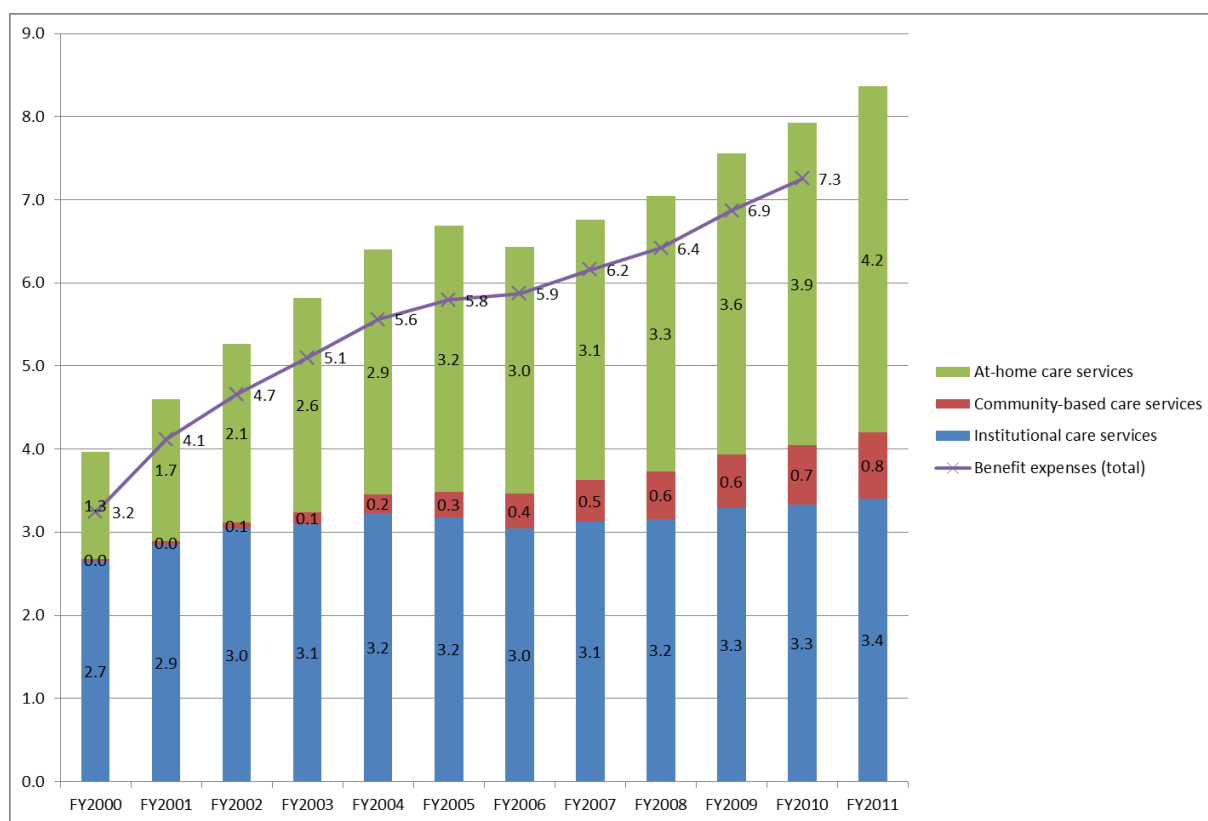


*Source:* National Institute of Population and Social Security Research (2013). “Household Projections for Japan: 2010–2035, Outline of Results and Methods.”

*Note:* Units are provided in percent for all figures.



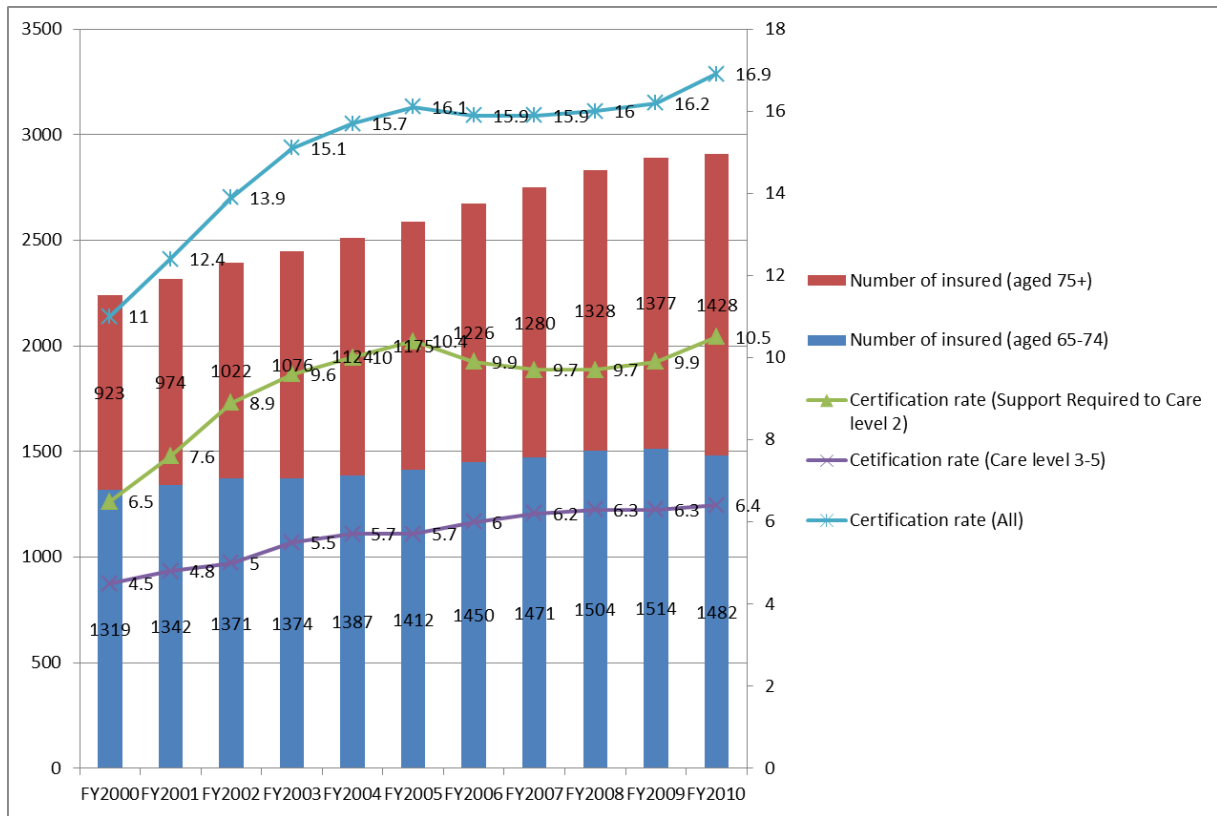
**Figure 3 LTC cost development**



*Source:* Kaigo Hoken; Kensu nado no suii for [All-Japan Federation of National Health Insurance Organizations] LTC costs ([http://www.kokuho.or.jp/statistics/st\\_kensuu\\_H23.html](http://www.kokuho.or.jp/statistics/st_kensuu_H23.html)) and Ministry of Health, Labour and Welfare Annual Report on Long-term Care Business Conditions (FY2010) [Kaigo Hoken Jigyo Jyokyo Hokoku (Heisei 22 nendo) (<http://www.mhlw.go.jp/topics/kaigo/osirase/jigyo/10/>)] for LTC benefit expenses. The figure for LTC benefit expenses excludes six municipalities in the Fukushima Prefecture that were seriously damaged by the earthquake.

*Note:* Units are provided in trillion yen.

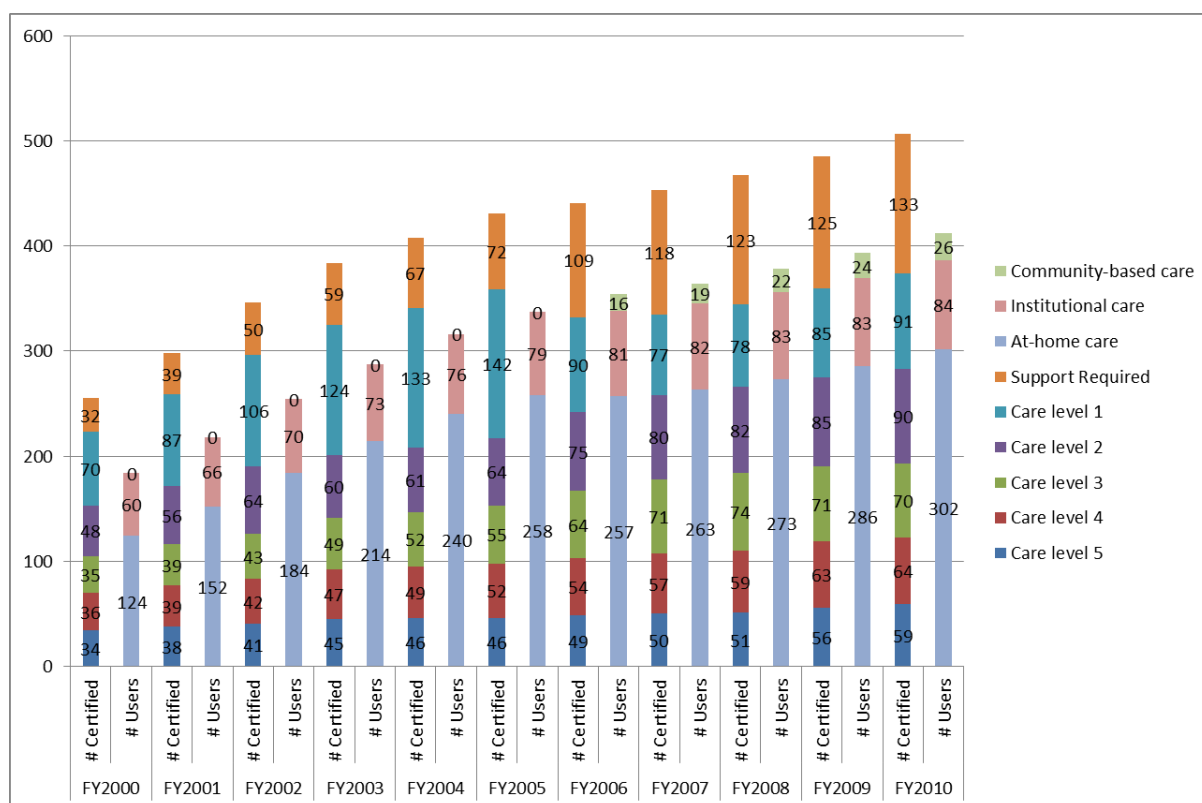
**Figure 4 Number of insured and certification rate**



*Source:* Ministry of Health, Labour and Welfare “Annual Report on Long-term Care Business Conditions (FY2010) [Kaigo Hoken Jigyo Jyokyo Hokoku (Heisei 22 nendo)” (<http://www.mhlw.go.jp/topics/kaigo/osirase/jigyo/10/>).

*Note:* Units are expressed in ten thousand persons for the number of the insured and percent for certification rates.

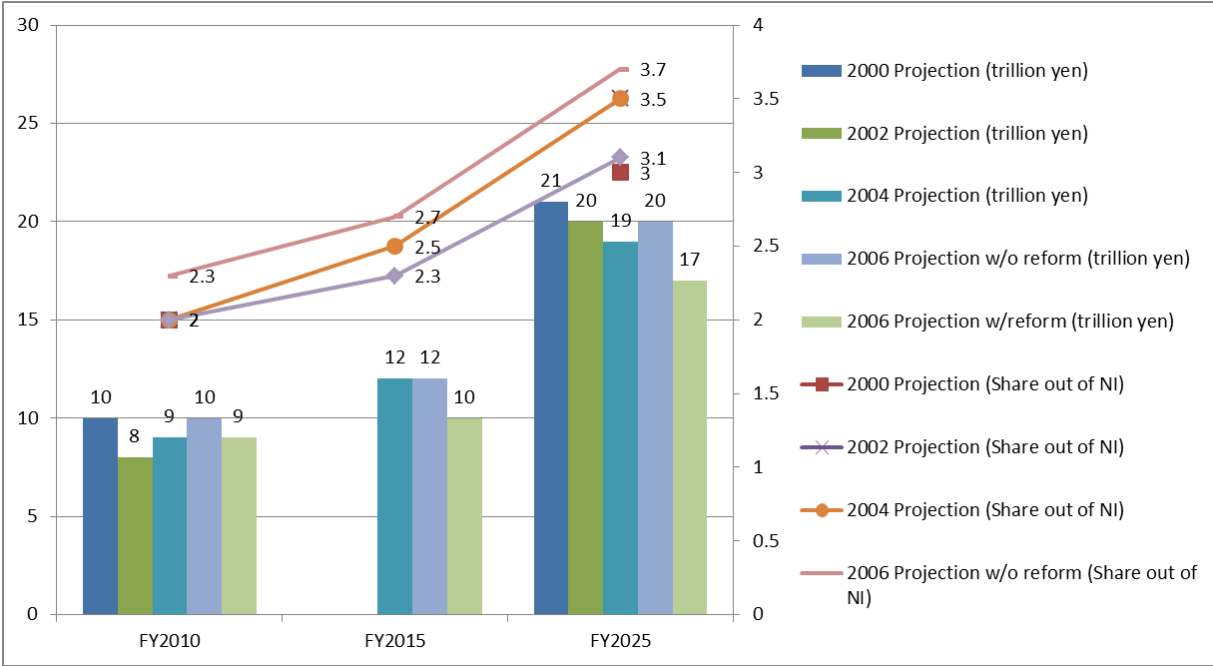
**Figure 5 Number certified by care level and users by type**



Source: Ministry of Health, Labour and Welfare “Annual Report on Long-term Care Business Conditions (FY2010) [Kaigo Hoken Jigyo Jyokyo Hokoku (Heisei 22 nendo)]” (<http://www.mhlw.go.jp/topics/kaigo/osirase/jigyo/10/>).

Note: Units are expressed in ten thousand persons.

**Figure 6 Projections of social security benefits and burdens**



Source: Ministry of Health, Labour and Welfare, “Projections of social security benefits and burdens.”

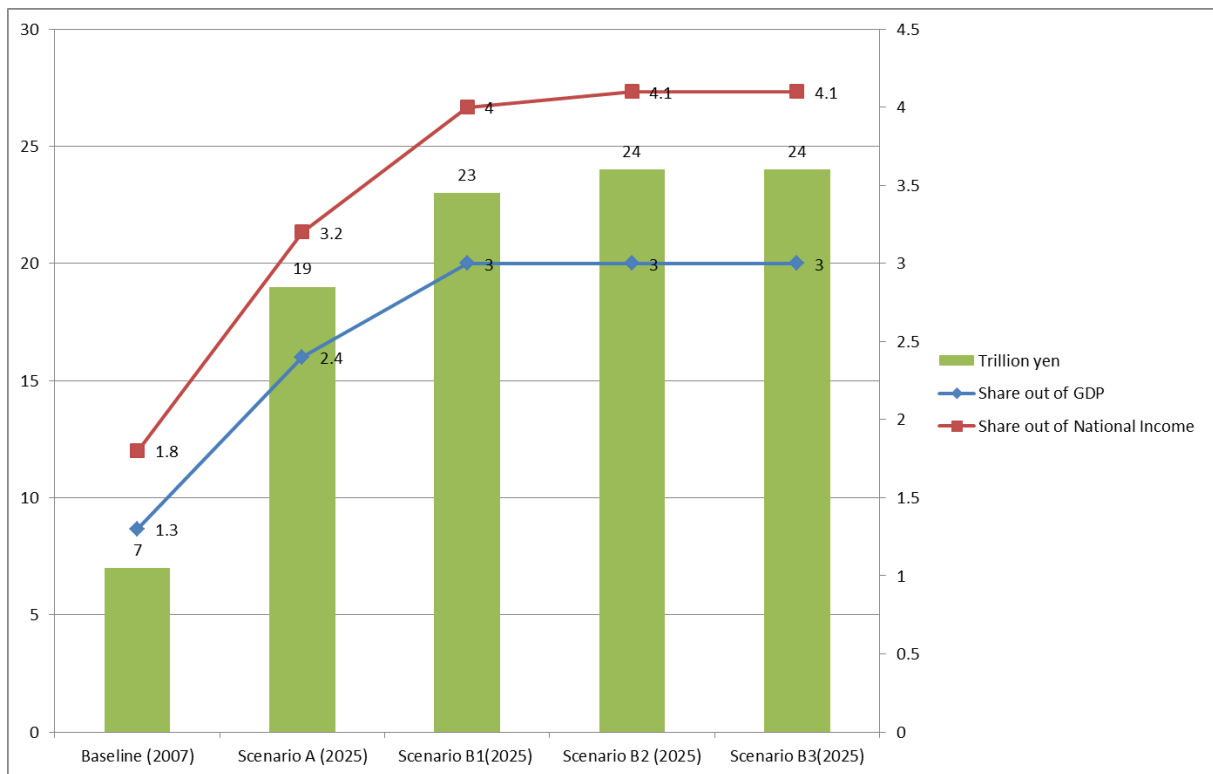
2000 Projection (October 2000) and 2002 Projection (revision of the 2000 Projection; May 2002) are available at <http://www.mhlw.go.jp/shingi/2002/05/s0517-2a.html>.

2006 Projection (May 2006) is available at <http://www.mhlw.go.jp/houdou/2004/05/h0514-3.html>.

2008 Projection (May 2008) is available at <http://www.mhlw.go.jp/houdou/2006/05/h0526-3a.html>. The figures for FY2010 refer to those for FY2011 in the 2008 projection.

Note: Units are provided in trillion yen for the amount and percent for share out of national income (NI).

**Figure 7 Projection of LTC costs in 2005 by the National Council on Social Security**

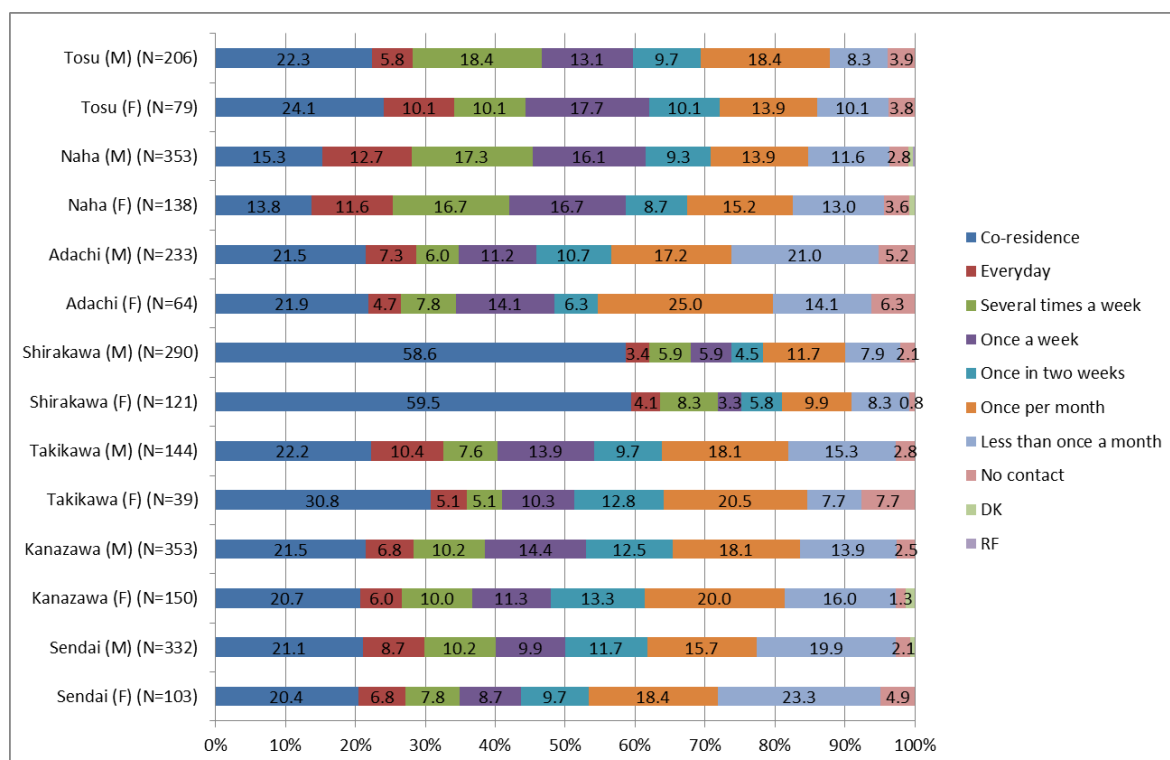


Source: National Council on Social Security (2006).

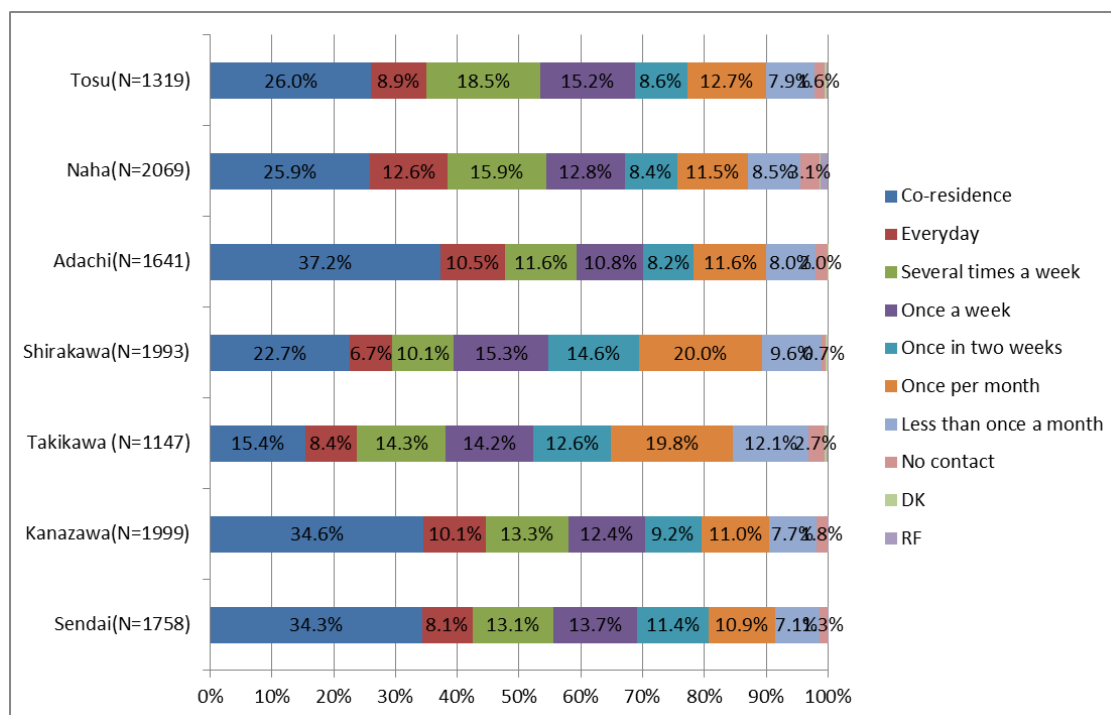
<http://www.kantei.go.jp/jp/singi/syakaihosyoutokuminkaigi/iryuu.html>.

**Figure 8 Frequency of contact with parents and children by region**

(1) With parents

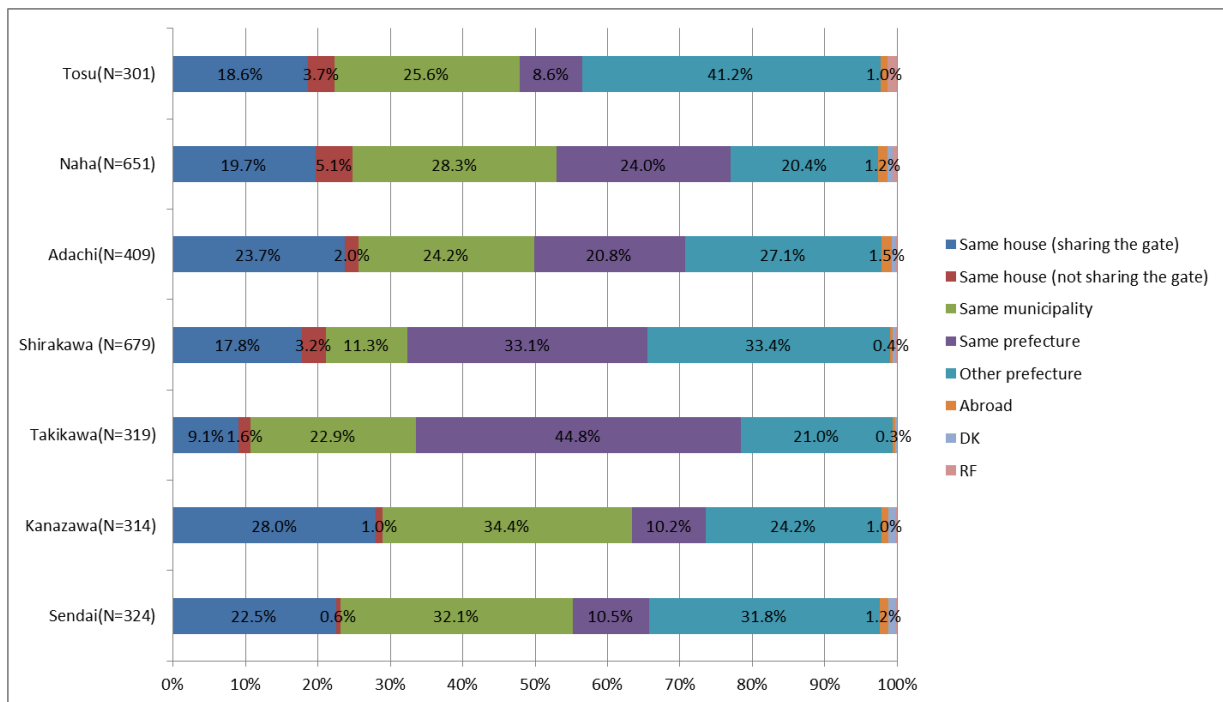


(2) With children



Source: JSTAR (Waves 1 and 2).

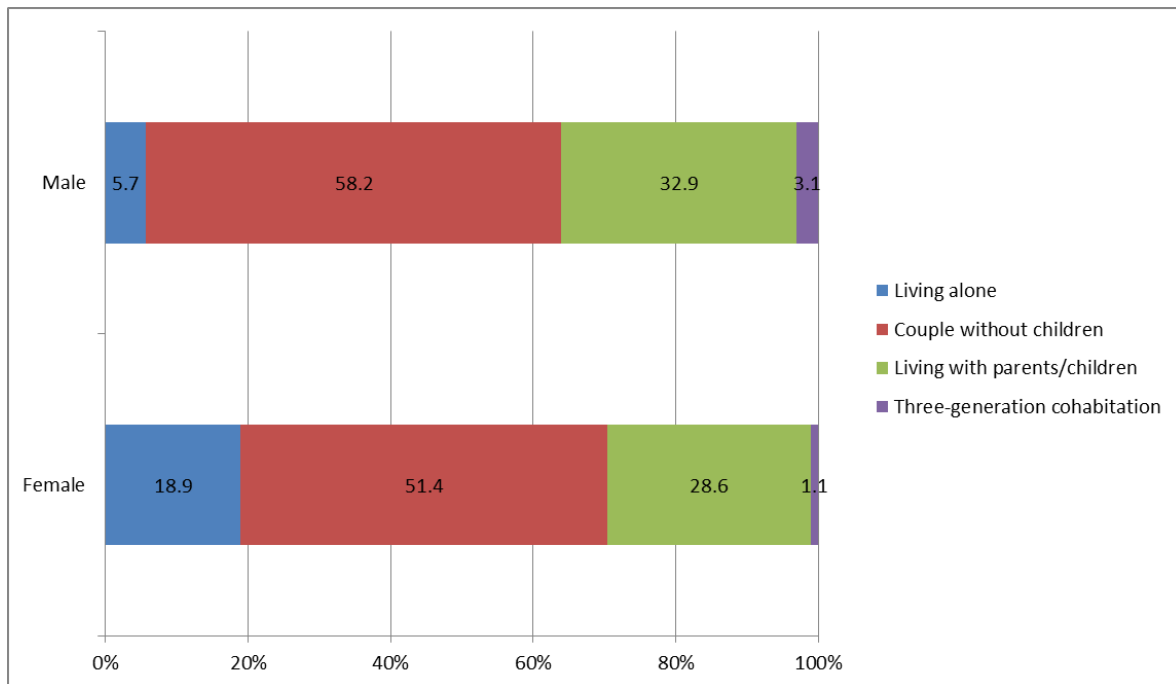
**Figure 9 Location of children’s residence by region**



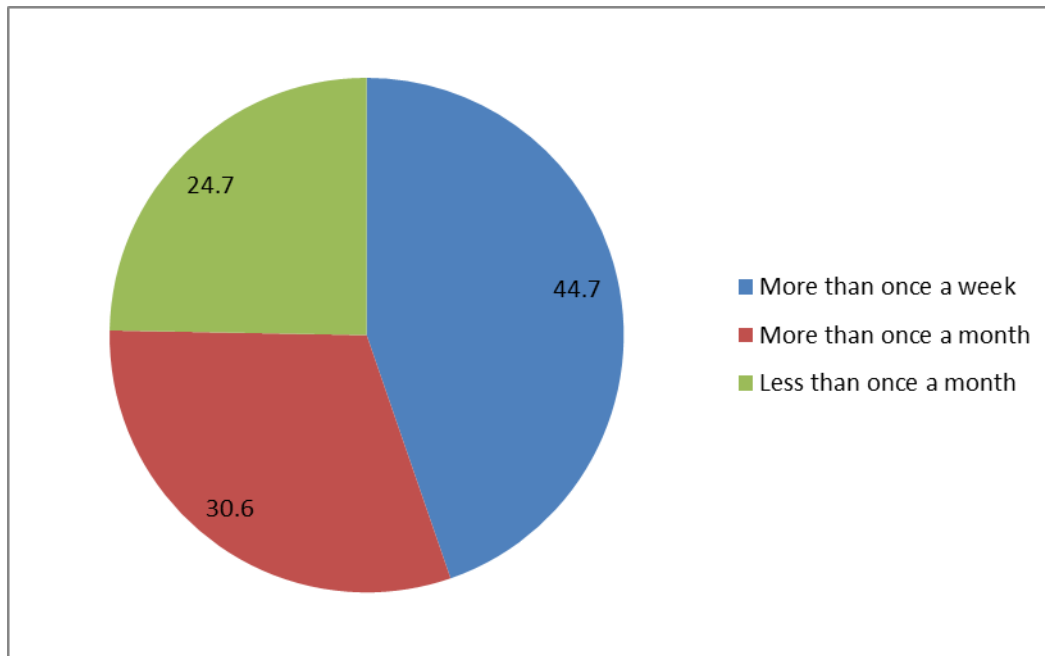
Source: JSTAR (Waves 1 and 2).

**Figure 10 Family type and contact with children by gender**

**(1) Family type**



**(2) Contact with children (female)**

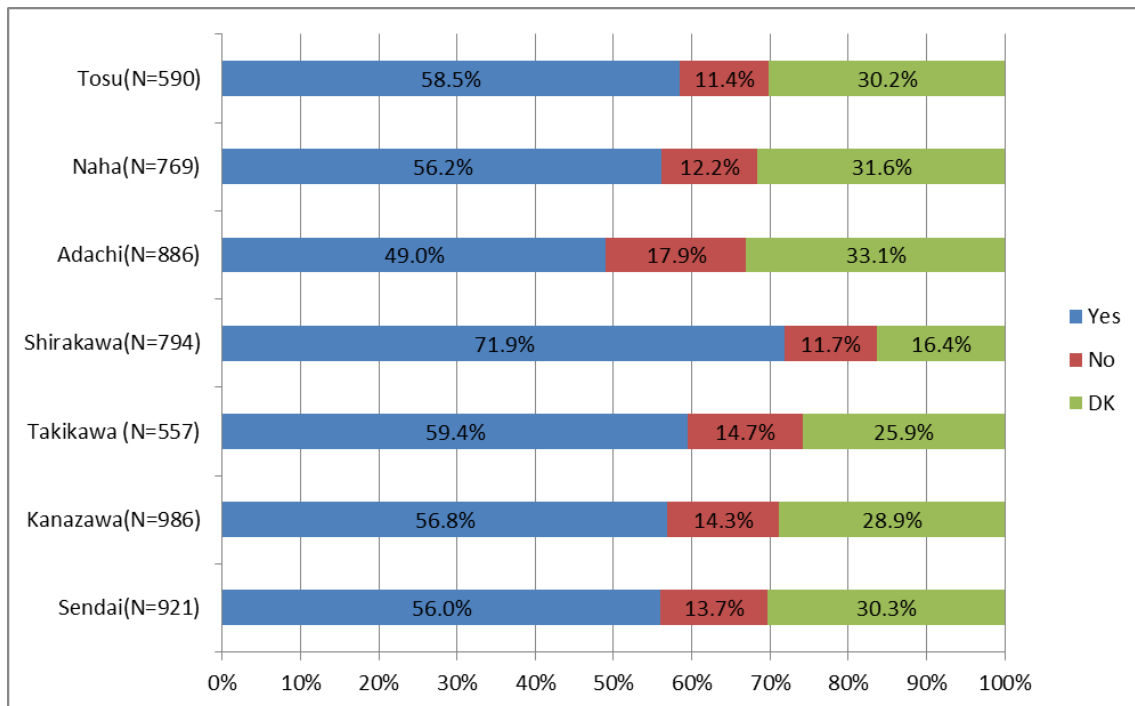


Source: JSTAR (Waves 1 and 2).

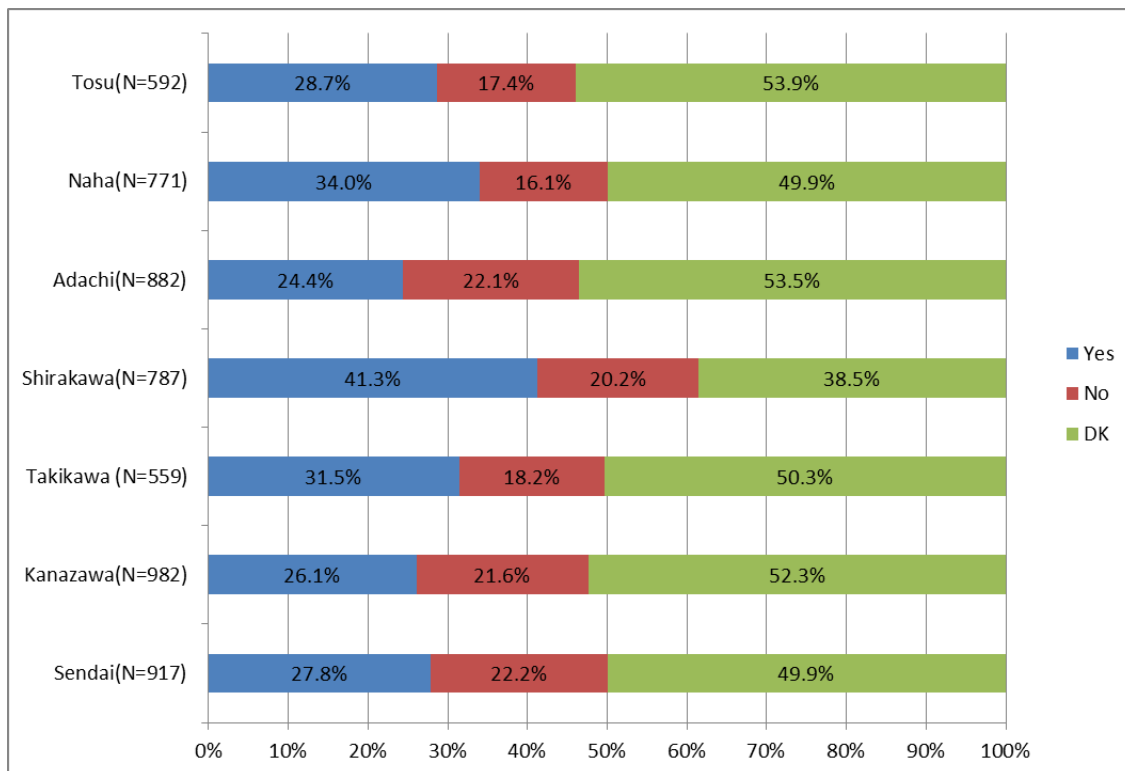


**Figure 11 Indicators of social capital by region**

**(1) Do you trust people in the neighborhood?**



**(2) Are the neighborhood people willingly helpful toward others?**



Source: JSTAR (Waves 1 and 2).