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Review

Future LTC needs of the elderly in Japan with some reference to Germany

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Abstract

Due to the highest life expectancy at birth among OECD member countries, the Japanese elderly face the risk of long-term care (LTC) needs. Japan and Germany have implemented public long-term care insurances, and both countries hoped that improving care in the community would lower nursing home usage and spending. After reviewing the LTC recipient rate of the elderly in Japan and Germany from international perspectives, the LTC recipient rate and expenditure among the Japanese elderly were estimated for the period of 2020-2070, using the results of the projection of the elderly by dependency level obtained from the INAHSIM (Integrated Analytical Model for Household Simulation) 2018 simulation. Long-term care expenditure is quite closely related to ageing and it is important to reduce the LTC recipient rate through prevention and putting the right incentives in the system.

Key words: long-term care (LTC), LTC recipient rate, Japan-Germany comparison, population-household projection

Introduction

The rapid aging of the population has been increasing the demand for formal long-term care services in Japan, and public long-term care (LTC) insurance has been implemented since April 2000. The principles underlying the LTC Insurance are the universality of coverage (although the benefits are available mainly for the elderly), the financing through social insurance (although the public fund finances about 45% of the cost), the freedom of choice by service users, and the reliance on a service market [1]. The main purposes of the LTC Insurance are to share the burden of caring for the elderly among all members of the society and to lessen the burden of family caregivers. But it is also implied to relieve some of the financial pressures on the health expenditure of the elderly, in which long-term stays of the elderly patients in hospitals have been included [1]. Although the number has been decreased in recent years, many geriatric hospitals in Japan had functioned just like nursing homes because of the shortage of facilities for institutional care.

Germany has introduced a mandatory social LTC insurance that covers about 90 per cent of the population. The LTC insurance has national eligibility criteria that entitle the individual to different types of services or cash benefits, and the scheme is financed through social insurance contributions paid by employees and employers. There is no means-test for the scheme's benefits, but there is means-tested social assistance to finance the costs of care that exceed the benefit payments [2]. In the German system, entitlement is independent of the age of the dependent persons, but it is based on whether the individual needs help with carrying out at least two basic activities of daily

living (ADLs) and one additional instrumental activity of daily living (IADL) for an expected period of at least six months [3]. People with lower levels of dependency are not covered by the German LTC Insurance.

The Japanese LTC Insurance implemented in 2000 followed the German model, and there are many similarities between the two systems. The LTC Insurance relies on a mandatory social insurance model. Benefits are available after a care needs assessment, and the universal benefit entitlement for the elderly are based strictly on the extent of physical or mental disability, regardless of means or whether any potential informal caregiver network is available [4].

On the other hand, there are many important differences between the two systems. The main beneficiaries of the Japanese LTC Insurance are the elderly aged 65 or over (Category 1). Persons aged 40 to 64 years old and subscribers of health insurance (Category 2) should pay income-related contributions, but they are only entitled to care related to cognitive impairments. Cash options are not available in the Japanese system. Total costs are covered by the contributions in the German system. The contribution rate is determined by the law and universality in terms of benefits is intended in the German system, while this is not the case in Japan. The Japanese program is financed through a combination of contributions from the insured, government subsidies, and user charges. Service users must pay 10 percent of expenses (Note: User charges have been increased to 20 or 30% of expenses for the elderly with high income.), although there is an upper ceiling

for this user charge. Municipalities administer LTC Insurance based on national guidelines; each determines its own budget and insurance premiums for its residents. Premiums for elderly persons (Category 1) vary by income status of the insured and by municipality, and premiums for Category 2 insured persons (age range 40-64) are collected with health care insurance and pooled at the national level. Expenditures extracting user charges are covered evenly by government subsidies and contributions. Regional differences in benefits as well as contribution levels are allowed to leave the management of the system to each municipality's discretion in the Japanese system.

One of the main reasons to introduce the LTC Insurance in Japan was to reduce the number of so-called socially induced hospitalization cases especially among elderly patients. There had been frequent use of hospitals instead of LTC facilities because the accessibility to the latter is limited, and the medically oriented services are readily accessible to the elderly in Japan. Those elderly who stay in hospitals much longer than medically appropriate are labeled as "social hospitalization," an induced stay in hospitals caused by social reasons. However, there is still a substantial proportion of the elderly in long term care who are cared for in hospitals, paid for by public health insurance. Since the implementation of LTC Insurance, the Japanese government has made a number of moves to contain costs. There had been a large increase in the demand for institutional beds following the implementation of LTC Insurance, but the Japanese government was unwilling to increase the supply of this higher cost care option by building new nursing homes, resulting in long waiting lists for LTC institutions [5]. The elderly assessed as the lowest care needs level have been moved to a preventive scheme since 2006 [6]. Charges for 'hotel costs' fees for accommodation and food have been introduced in institutional care, and home help services have been restricted to those who live alone or with severe disabilities since April 2006.

In this paper, the LTC recipient rate by age group and sex among elderly people was compared between Japan and Germany in Section 2. Past trends and future prospects concerning the LTC recipient rate and expenditure among the Japanese elderly were presented in Section 3. Future prospects were obtained from the INAHSIM (Integrated Analytical Model for Household Simulation) 2018 simulation results, which is a dynamic micro-simulation model. Future LTC needs of the elderly, taking population ageing into consideration, were discussed in section 4.

LTC Recipient Rate among Elderly People in Japan and Germany

In the Japanese LTC Insurance, care needs assessment ranges from cautious levels 1-2 to care needs levels 1-5 (5 is most serious). Those elderly who are assigned as cautious levels receive preventive care services instead of prime LTC services. Concerning to the LTC recipient rate, we use two rates: Total and Prime. Prime LTC includes care needs levels 1-5, and Total LTC includes cautious levels as well as Prime LTC. Table 1 shows the latest data of the LTC recipient rate as well as LTC expenditure of the elderly by age group in Japan. The Total LTC recipient rate was 14.1%, but Prime LTC recipi-

ent rate was 11.8% of the elderly aged 65 or over. The Prime LTC recipient rate increased from 1.7% at age group 65-69 through 33.2% at age group 85-89 to 78.3% at age group 95+ in 2017. As LTC recipient rate increases sharply over 80 years old, about 80% of the LTC expenditure of the elderly was consumed by the elderly over 80. Moreover, as clearly seen from Table 1, those elderly in cautious levels represent 16% in terms of the number of LTC recipients but represent less than 5% in terms of LTC expenditure [7].

Figure 1 shows the LTC recipient rate by age group and sex for the years 2007 and 2017 in Japan. Age pattern of Total and Prime LTC recipient rates are similar, and the difference between two years are found in age group 85-89 and above for both sexes.

From now on, in dealing with the Japanese data, we focus on only Prime LTC in comparison with Germany and future projections. Therefore, the LTC recipient rate means Prime LTC recipient rate and LTC expenditure means Prime LTC expenditure for Japan. Figure 2 shows the LTC recipient rate by age group and sex in Japan and Germany. There are many similarities and differences in the LTC systems in Japan and Germany, but age pattern of the LTC recipient rate is rather similar between the two countries.

Table 2 shows the LTC recipient rate among the elderly aged 65 or over in 5 countries. About 14% of them received LTC services (4.1% for facility-based services and 9.5% for home-care services) in Germany in 2016. The corresponding figure for Japan was 14.1% (including cautious levels) or 11.8% (excluding cautious levels). The number of elders receiving care at home – compared to institutions – is high in Japan. According to German source, the percentage of the German elderly who receive LTC services was 13.9% in 2015 [8]. The rates in France and the US in Table 2 might be underestimated. In the US in 2014, about 7 million people aged 65 or older needed assistance to perform everyday activities [9], which corresponds to about 15% of the elderly.

Table 2 also shows the LTC expenditure (health and social component) for the total population in 6 countries. However, this OECD figures for public spending on LTC should be used carefully because of comparability problem. As seen in Table 1, the Prime LTC expenditure for the elderly was 9.0 trillion yen (1.7% of GDP) in Japan in 2016. The LTC expenditure covered by the LTC insurance was 28.3 billion euro (0.9% of GDP) in Germany in 2016 [10]. However, public LTC expenditure for the whole population was 1.3% of GDP in 2015 in Germany (Table 2).

LTC Recipient Rate and Expenditure among Japanese Elderly: 2000-2070

The LTC recipient rate and expenditure among the Japanese elderly in future years were obtained from the INAHSIM 2018 simulation results. A detailed explanation of the INAHSIM model is found by Fukawa [11], and a summary of the INAHSIM 2018 Simulation is found by Fukawa [12]. The elderly aged 65 or over were classified into 5 dependency levels, and future LTC expenditure of the elderly was calculated by applying the future age-group population by dependency level (obtained from the INAHSIM 2018 simulation) to the age-relat-

Table 1. LTC recipient rate and LTC expenditure of the elderly (65+) by age group in Japan

Age Group	Population in 2017 (in thousand)	LTC Recipients in October 2017					LTC Expenditure in FY 2016 (billion yen)		
		(in thousand)		Recipient Rate (%)		a (%)	Total	Prime	a (%)
		Total	Prime	Total	Prime				
65+	35,170	4,954.4	4,157.3	14.1	11.8	16.1	9,475.4	9,028.3	4.7
65-69	9,920	208.6	171.1	2.1	1.7	18.0	368.9	346.5	6.0
70-74	7,750	332.0	268.6	4.3	3.5	19.1	558.6	523.7	6.2
75-79	6,740	610.3	487.0	9.1	7.2	20.2	1,045.2	978.4	6.4
80-84	5,290	1,090.1	874.9	20.6	16.5	19.7	1,952.1	1,831.5	6.2
85-89	3,400	1,353.4	1,127.4	39.8	33.2	16.7	2,575.2	2,448.0	4.9
90-94	1,590	962.7	852.7	60.5	53.6	11.4	2,016.0	1,953.2	3.1
95+	480	397.3	375.6	82.8	78.3	5.5	959.5	947.0	1.3

a: Share of Preventive Services [7].

Table 2. LTC recipient rate of the elderly (65+) in developed countries (in %).

	France	Germany	Japan	Sweden	UK	USA
LTC recipients of the elderly, 2016 ^a	10.1	13.6	11.8 ^b	15.4		9.9
- in institutions (other than hospitals)	4.1	4.1	2.7 ^a	4.5		2.4
- at home	6.0	9.5		10.9		7.5
LTC expenditure (% of GDP), 2015 ^c	1.7	1.3	2.0	3.2	1.5	0.5

Notes: a. OECD Health Statistics 2018.

b. from Table 1 (2017)

c. LTC expenditure (health and social component) by government and compulsory insurance schemes based on OECD Health at a Glance 2017.

Table 3. LTC recipients and expenditure of the elderly in Japan: 2005-2070.

Year	Elderly aged 65 or over					Elderly aged 85 or over				
	Population (million)	LTC Recip. (million)	LTC Rec /Pop (%)	Expend. (trillion yen)	Index	Population (million)	LTC Recip. (million)	LTC Rec /Pop (%)	Expend. (trillion yen)	index
2005	25.7	2.9	11.3	5.9		2.9	1.3	43.7	2.9	
2010	29.2	3.1	10.7	7		3.8	1.6	41.3	3.7	
2015	33.5	3.9	11.8	8.8	1	4.9	2.2	44.1	5.1	1
2020	35.6	4.9	13.9	11.6	1.3	5.8	2.4	40.9	6.1	1.2
2030	36.2	5.9	16.2	14.1	1.6	7.3	3.1	42.8	8.1	1.6
2040	37.3	6.5	17.5	15.8	1.8	8.9	4	44.8	10.3	2
2050	37	6.9	18.6	16.7	1.9	8.5	4	46.9	10.4	2
2060	34.1	7.5	22.1	18.8	2.1	10.1	4.9	48.8	13.1	2.6
2070	30.8	7.5	24.4	19.2	2.2	10.1	5.4	53	14.5	2.8

Notes 1: Values in 2005-2015 are actual data, and values in 2020-2070 are the projection results of INAHIM 2018.

2: Expenditures in future years are in 2015 price

related expenditure profiles by dependency level in 2015. More explanation of the method is found by Fukawa [6].

Table 3 shows the historical trends and future prospects of the LTC recipient rate and expenditure among the Japanese elderly. The LTC recipient rate for the elderly aged 65 or over will increase from 11.8% in 2015 to 24.4% in 2070, but those for the elderly aged 85 or over will increase from 44.1% in 2015 to 53.0% in 2070. The LTC expenditure for the elderly aged 65 or over will increase from 8.8 trillion yen in 2015 to 19.2 trillion yen (2015 price) in 2070, and those for the elderly aged 85 or over will increase from 5.1 trillion yen in 2015 to 14.5 trillion

yen (2015 price) in 2070. The share of the elderly aged 85 or over in terms of LTC expenditure will increase from the present 50% level to three fourths in 2070.

Discussions

Japanese national medical expenditure in 2016 was 42.1 trillion yen (7.8% of GDP), of which elderly people aged 65 or over used 4.7% of GDP. The cost of LTC Insurance, almost exclusively used by the elderly, was 1.8% of GDP in 2016. In spite of the substantial differences in how they currently fund and provide LTC, OECD countries are converging on quite

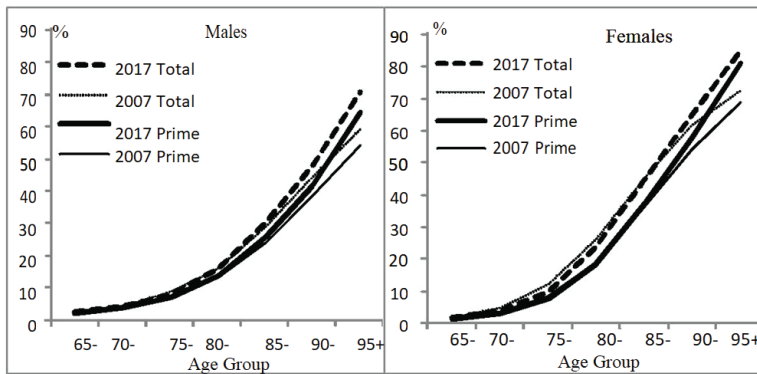


Figure 1. LTC recipient rate by age group and sex in Japan: 2007 and 2017 [7].

similar strategies: shifts toward enabling people to age in place rather than providing LTC in residential settings, toward allowing people to have more choice in care providers, and toward distributing funds from central government to sub-national levels in an effort to reduce disparities in the delivery of services to people with similar needs [13].

In introducing public LTC insurance, Japan followed the German model. However, there are many important differences between the two systems. Nevertheless, the LTC recipient rate of the elderly by age group in 2015 is quite similar in both countries. It is a common challenge for both countries to make social security systems neutral to the choice of individuals in their life style in order to increase the responsiveness of the system and to improve the quality and efficiency of services provided [14]. The German and Japanese governments both hoped that improving care in the community would lower nursing home usage and spending. Although the LTC insurance has not led quickly to deinstitutionalization, it has brought innovation in institutional care in Japan, and both countries continue to try to shift the balance away from institutionalization and toward home and community-based services [15].

The LTC expenditure shown in Table 2 includes spending on health and social care support services for people with chronic conditions and disabilities who need care on an ongoing basis. The health component includes spending on nursing, personal care services and palliative care and covers services provided in residential care and at home. The social care portion includes assistance with instrumental activities of daily living (ADLs). Social care services sit in different places in different country's welfare systems, and countries' reporting practices for allocating spending to the health and social care components may differ [16].

The number of the LTC recipients and LTC expenditure of the Japanese elderly were estimated for 2020-2070 using the INAHSIM 2018 projection results. The number of the elderly aged 65 or over will peak out around 2040, but the number of LTC recipients among the elderly aged 65 or over will continue to increase until 2060, and LTC recipient rate will increase from 11.8% in 2015 to 24.4% in 2070. In accordance with the increase in the number of LTC recipients, LTC expenditure of the elderly aged 65 or over in 2070 will be more than two times than 2015 level, and that of the elderly aged 85 or over will be about three times than 2015 level.

According to the Japanese Government estimation in May

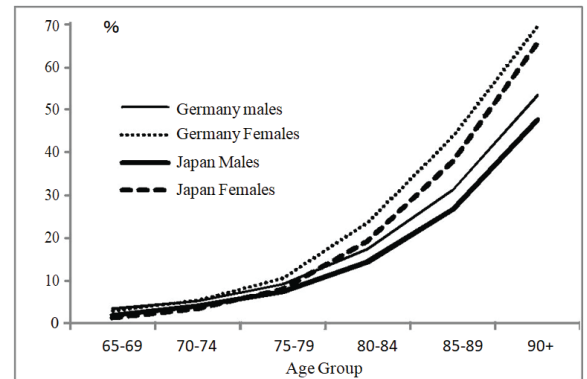


Figure 2. LTC recipient rate by age group and sex in Japan and Germany: 2015.

2018, the Total LTC expenditure will increase from 10.7 trillion yen (1.9% of GDP) in 2018 to 25.8-28.7 trillion yen (3.3-3.1% of GDP) in 2040. If we assume that the price of LTC services will increase in parallel with GDP increase, this estimation suggests that LTC expenditure of the elderly in 2040 will be about 1.7 times than the 2018 level, which is consistent with the result shown in Table 3. In any case, the assumptions that have been used are plausible but not exhaustive, and the expenditure projections would not constitute the total costs of long-term care to society, because they do not include the costs of service users or the opportunity costs of informal care.

The LTC expenditure for the elderly will increase remarkably in future due to aging of the population in Japan. The finding that the proportion of GDP required to fund LTC services for older people will need to rise substantially between 2000 and 2050 suggests that improvements in both efficiency and cost-effectiveness of LTC will be important to restrain the rise in unit-costs, and the latter may require closer matching of services to needs, not only to increase the benefits relative to expenditure but also to improve the outcomes for service users and their families [2]. As the LTC recipient rate of the elderly is similar between Japan and Germany now, both countries may follow the same path concerning the LTC expenditure of the elderly in future years. Among developed countries, only Japan and Germany will face massive population decline. Japanese aging rate (28% in 2018) is already the highest among developed countries, and it is anticipated to reach more than 38% in 2060, which is never anticipated in any other developed country. The challenge of controlling age-related benefits is, therefore, more acute in Japan than in any other country.

The only positive solution to control the LTC expenditure is to reduce the number of LTC service users and to deliver services efficiently, which means a) prevention is important, b) service providers and service users should face the right incentives, and c) services are provided under competitive circumstances [14]. The urban elderly with higher income tend to pay for LTC services by themselves, and those elderly with low income has a higher facility entry rate than those with higher income [18]. The implementation of LTC Insurance has physical, psychological and financial effects on family caring, particularly on the ability of the care givers to continue in employment. Following the introduction of LTC Insurance, high income Japanese family care givers were substantially more likely to be employed, or spend increased time in employment,

but for middle and low income groups there was no significant change [5]. The intention of the LTC Insurance to develop a market for social care providers and give older people a choice of services based on convenience and quality rather than price, has been relatively successful but has faced some difficulties: as for elsewhere in the world, low wages for care staff is creating recruitment problems, particularly in Tokyo [19].

The Japanese Government has been trying to change the social security system to be sensitive to the needs of people of all generations. Every country is working to slow LTC through freezing the services covered, restricting care to those deemed in greatest need, and not raising reimbursement rates to care providers [13]. In order to increase the sustainability of the LTC Insurance, it is effective to reduce the benefit catalogue of the Insurance. However, this approach has caused the costs of care to be shifted to individuals and their relatives as well as to other programs that provide income and housing assistance to the needy elderly. By investing in prevention and in community resources, Japan is creating supportive communities that seek to maintain wellness and reduce social isolation in order to prevent or delay the need for state-funded services [20]. So far, the Japanese system has managed to sustain the system by increasing insurance premiums and user co-payments, but it is not clear whether this approach will be sustainable in the long term under significant pressure as a result of its ageing population and shrinking workforce [20].

Conclusions

The intention of the Japanese LTC Insurance to develop a market for social care providers and give older people a choice of services based on convenience and quality rather than price, has been relatively successful but the system has faced such difficulties as chronic care manpower shortages, discontinuity in employment of family care givers of middle and low income groups, and long-term sustainability of the system. Despite rather big differences between the LTC insurances in Japan and Germany, the LTC recipient rates of the elderly in both countries are rather similar now. Among developed countries, only Japan and Germany will face massive population decline, and it is plausible that both countries may follow the same path concerning the LTC expenditure of the elderly in future. The LTC expenditure is quite closely related to ageing (much more sensitive to ageing than medical expenditure), and massive increase in the LTC expenditure is anticipated due to aging of the population. Therefore, it is quite important to reduce the number of dependent elderly in future through better preven-

tion, and it might be also necessary to introduce more effective cost containment mechanisms in the Japanese LTC Insurance.

References

1. Fukawa T. Japanese Welfare State Reforms in the 1990s and Beyond: How Japan is Similar to and Different from Germany. *Deutsches Institut fuer Wirtschaftsforschung (DIW) Vierteljahrsheft* 4. 2001; 571-585.
2. Comas-Herrera A, Raphael W, Cristiano G, et al. Future long-term care expenditure in Germany, Spain, Italy and the United Kingdom. *Ageing Soci.* 2006; 26: 285–302.
3. Rothgang H, Igl G. Long-term care in Germany. *The Jpn J Soc Secur Pol.* 2007; 6: 54-84.
4. Olivares-Tirado . *BMC Health Ser Res.* 2011; 11:103.
5. Tamiya N, Noguchi H, Nishi A, et al. Population ageing and wellbeing: lessons from Japan's long-term care insurance policy. *Lancet.* 2011; 378: 1183-92.
6. Fukawa T. Elderly Population Projection and Their Health Expenditure Prospects in Japan. *Mod Econ.* 2017; 8: 1258-1271.
7. Fukawa T. Recipients of LTC services among the elderly in Japan and Germany, IFW DP Series. 2018; 1. (in Japanese).
8. Statistisches Bundesamt. *Statistisches Jahrbuch.* 2017.
9. Nguyen V. Long-Term Support and Services, Fact Sheet, AARP Public Policy Institute. 2017.
10. Bundesministerium fur Gesundheit. *Die Finanzentwicklung der sozialen pflegeversicherung.*
11. Fukawa T. Household Projection and Its Application to Health/Long-term Care Expenditures in Japan Using INAHSIM-II. *Soc Sci Comput Rev.* 2010; 29: 52-66.
12. Fukawa T. Projection of Living Arrangements of the elderly in Japan Using INAHSIM. *Studies in Asian Social Science,* 2018.
13. Joshua L. Aging and Long Term Care Systems: A Review of Finance and Governance Arrangements in Europe, North America and Asia-Pacific. World Bank, Social Protection & Labor Discussion Paper No. 1705. 2017.
14. Fukawa T. Effects of population aging on public health and long-term care insurances in Japan and Germany. *The Jpn J Soc Sec Pol.* 2002; 1:2.
15. Campbell JC1, Ikegami N, Gibson MJ. Lessons From Public Long-Term Care Insurance In Germany And Japan. *Health Aff (Millwood).* 2010; 29(1):87-95.
16. Robertson R. The social care and health systems of nine countries. Commission on the Future of Health and Social Care in England, *The King's Fund.* 2014.
17. Japanese Government. Blue-paper on Prospects of Social Security Finance till 2040. (in Japanese). 2018.
18. Akiyama N, Shiroiwa T, Fukuda T, et al. Healthcare costs for the elderly in Japan: Analysis of medical care and long-term care claim records. *PLoS One.* 2018;13(5):e0190392.
19. Centre for Policy on Ageing. Long term care insurance in Japan. 2016.
20. Curry N, Castle-Clarke S, Hemmings N. What can England learn from the long-term care system in Japan? Research report, Nuffield Trust. 2018.

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