Identifying Discretion of Municipalities to Undertake Eligibility Assessments for Japan's Long-Term Care Insurance Program

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ABSTRACT

Eligibility assessments play an important role in Japan's long-term care insurance program and have been designed so that municipalities do not have discretion in their working. However, there are doubts about eligibility assessments based on the municipal fiscal situation. This study empirically identifies the discretion of municipalities to undertake eligibility assessments employing the idea of opportunistic municipal behavior at amalgamation. Amalgamation offers municipalities an incentive to free ride (e.g., public debt accumulation) when they can subrogate the load to a new municipality after amalgamation. If so, pre-merger municipalities might increase the eligibility ratio before amalgamation. Difference-in-difference regression confirms a free-rider effect of pre-merger municipalities in the eligibility assessments for long-term care by Japanese municipalities. Smaller pre-merger municipalities increase the eligibility ratio immediately before amalgamation. These results mean that the Japanese long-term care insurance system is not managed in accordance with the institutional design.

Keywords: Long-term care insurance; Eligibility assessment; Municipal amalgamation; Free-rider behavior; Difference-in-difference

JEL Classifications: H51, H73, H75, I13, I18, R51

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1 Introduction

Rapid aging and weakened functioning of the family as primary caretaker of the elderly are common problems in developed countries. In Japan, the number of elderly people in 2010 was about 33 million, or 26.7% of the total population, rendering Japan one of the most aged countries. Against such a background, the Japanese long-term care insurance (LTCI) program was introduced in fiscal year (FY) 2000 to meet the needs of the increasing number of the elderly who need long-term care.

LTCI is administered at the municipal level over a 3-year program management period based on the pay-as-you-go principle. The insurers (municipalities) have established special LTCI accounts for this purpose. Campbell and Ikegami (2000) and Mitchell et al. (2004) emphasize that the linkage between benefit expenditure and premium burden is an important innovation of Japan's LTCI program. Residents aged 65 years and more (category I) and 40–64 years (category II) are insured under the LTCI scheme. When an insured individual needs long-term care, the Certification Committee for Long-term Care Needs of a municipality makes an eligibility assessment by evaluating the person's physical and mental condition necessitating care. If the number of eligible individuals and the amount of benefits in a period increase, the municipality increases the next period's premium to balance the budget. Meanwhile, eligibility assessments are conducted by an objective evaluation based on the physical and mental care needs of individuals.

Hayashi and Kazama (2008) find that municipalities facing financial difficulties control the eligibility assessments to balance the LTCI budget. The authors argue that the eligibility assessment could thereby function as a gatekeeper and constitute a powerful containment mechanism against increasing LTCI benefits. If the eligibility assessment process of the LTCI depends on the municipal fiscal ability, it is against the purpose of the LTCI to secure long-term care as a universal service. Therefore, it is important to confirm the discretion of the municipality for eligibility assessment. This study confirms the discretion of the municipality for eligibility assessment employing the differencing method of Hayashi and Kazama (2008).

In this study, I use municipal amalgamation in the Heisei era as the extrapolation shock of the eligibility assessment of LTCI. Recently, some studies have applied the idea of free-rider behavior of pre-merger municipalities. Amalgamation offers municipalities an incentive to accumulate public debt before amalgamation because the new municipality after amalgamation subrogates the load. Hinnerich (2009) and Jordahl and Liang (2010) find that smaller local

governments tend to accumulate public debt to free ride on the increased number of taxpayers in the new, expanded municipal entity. There is the typical common-pool problem first explored by Tullock (1959) and Buchanan and Tullock (1962). While Hinnerich (2009) focuses on the 1969–1974 boundary reform in Sweden, Jordahl and Liang (2010) explore the country's first wave of boundary reform in 1952. These studies use difference-in-difference (DID) estimation to clarify municipalities' free-rider behavior before amalgamation. Employing the same estimation method, Saarimaa and Tukiainen (2015) investigate the case in Finland case and point out that the pre-merger municipality's free-rider incentive should be low under voluntary amalgamation because excessive free-rider behavior might exclude that participant from the amalgamation. In addition, Nakazawa (2016) confirms this hypothesis in the case of Japan.

On amalgamation, the eligible individuals of the pre-merger municipality before amalgamation are moved to the post-amalgamation municipality. Thus, if eligibility assessments could be conducted arbitrarily, the municipality would be likely to increase the number of eligible individuals immediately before amalgamation considering that the load would be borne by the larger entity after amalgamation. Therefore, this study examines the discretion of municipalities with regard to eligibility assessment by examining the free-rider behavior of pre-merger municipalities.

The remainder of this paper is organized as follows. Section 2 explains the institutional background of the local LTCI system and municipal amalgamation in Japan. The empirical methodology is presented and data described in Section 3. Section 4 presents the estimation results and discusses the main findings. Section 5 concludes the paper.

2 Background

2.1 The LTCI system in Japan

LTCI was introduced for the elderly in FY 2000 to solve the long-term care problem in Japan. The insurers (municipalities) have established special LTCI accounts for a 3-year program management period to administer the system. The municipalities estimate the total benefits for the next period and maintain a constant ratio of the total insurance benefits provided to the category I insured (aged 65 years and over). Therefore, the category I premium is linked to the benefit level. Surpluses, if any, are transferred to the Long-Term Care Benefit Fund (LTCBF) against future deficits. When fiscal resources for a certain program management

period are insufficient because of increasing benefits or decreasing revenue (owing to, e.g., forecast error regarding increase in the number of eligible individuals or failure in premium setting), the municipality could draw down the LTCBF or borrow from the Fiscal Stabilization Fund (FSF). However, to repay the FSF loan, the municipality would need to increase the premium for the next program period. Moreover, using the general budget to fund a municipality's LTCI special account is prohibited by law, beyond its entitlement of 12.5% of the LTCI benefits.[1]

Insured categories I and II can be grouped according to the nature of care required by the process of eligibility assessments. Conditions requiring care range from mild to serious in a multistep approach. The degree of eligibility ranges across six levels from "support need" (the lowest level) to "long-term care need V" (the highest level). The eligibility levels have been increased to seven since FY 2006 and the support need has been divided into two stages (I and II). Individuals eligible for support are not permitted to use some LTCI services (e.g., facility care services). The benefits are allocated based on points and are limited by the degree of eligibility. For example, the monthly benefit limits range from approximately 49,770 JPY (for support need I) to 358,300 JPY (for long-term care V).[2] In addition, benefit limits are set for the utilization of facility services by facility type, according to the level of eligibility.[3] The insured person should pay 10% of the care cost, while LTCI would cover the remaining 90%. By these institutional criteria, universal service use and horizontal equity vis-à-vis eligibility for LTCI benefits are guaranteed, irrespective of the insured individual's income and place of residence.

Eligibility assessments are performed in two stages. The first stage is a hearing on the physical and mental conditions of the person in need of long-term care. The person is asked a set of standardized questions, and the answers are evaluated mechanically by a judgment process. In addition, the person's physician writes a comment based on a unified style. In the second stage, the Certification Committee for Long-term Care Needs, consisting of medical and welfare specialists, decides the level of eligibility based on the result at the first stage. Thus, the eligibility assessment process appears to be objective and uniform. However, Hayashi and Kazama (2008) argue that municipalities that face financial problems control eligibility

[1] LTCI benefits are financed by premium revenue from category I and II insured (50%), the central government (25%), the prefectural government (12.5%), and the municipal government (12.5%).
[2] The data relate to the fifth program management period, from FY 2012 to FY 2014.
[3] Of course, an insured can purchase additional services above the limit at his or her own cost.

assessments to balance the LTCI budget. Their finding, if indeed correct, would undermine the very basis of the LTCI system.

2.2 Municipal amalgamation in Japan

The municipal amalgamation in Japan is roughly divided into three big waves. The first wave, from 1888 to 1889, reduced the number of municipalities from 71,314 to 15,820. The second wave lasted from 1953 to 1961, further reducing the number from 9,868 to 3,472. In the latest wave, between April 1999 and January 2012, the number almost halved from 3,229 to 1,719. In 1965, the Japanese government enacted the Municipal Amalgamation Law (the old law, henceforth), which included several measures to promote amalgamation, such as guaranteeing the same inter-governmental subsidy (the local allocation tax grant, LAT)[4] to the merged municipality for 10 years after amalgamation. However, although the old law was revised every 10 years until the 1990s, it did not provide for voluntary amalgamation, and the number of municipalities decreased by only 163 from 1965 to 1999.

A remarkable change occurred in the latter half of the 1990s when the Japanese government reviewed the roles of the central, prefectural, and municipal governments. In 1999, the old law was amended to conform to the provisions of the Omnibus Law of Decentralization, and additional measures were included to provide financial support for municipal amalgamation. Many municipalities pursued amalgamation only until the end of FY 2005, because the financial support provided by the national government for amalgamation under the old law was revised in FY 2006 under the new law. The number of amalgamations in FY 2004 and FY 2005 were 215 and 325, respectively.

The old law provided several types of financial support for amalgamation. First, the LAT guarantee period was extended to 15 years after amalgamation. Second, the law allowed amalgamated municipalities to finance 95% of the amalgamation cost (e.g., for construction) by issuing special-purpose amalgamation bonds for 10 years after amalgamation. Moreover, the central government covered 70% of the principal and interest payments on the bonds through the LAT. These incentives induced many municipalities to undergo amalgamation.

3 Empirical framework and data

[4] The LAT is the inter-governmental subsidy intended to adjust the uneven distribution of central government resources between local governments.

3.1 Empirical framework

Weingast et al. (1981) consider the incentive to free ride in a formal framework. At the efficient spending level, the marginal social cost of a public-spending project in a certain district equals the marginal social benefit. However, if the costs of the project must be shared among n districts, only $1/n$ of the social marginal cost of the project should be loaded on a district.[5] Therefore, when municipalities amalgamate, a small municipality tends to have a strong incentive to free ride. The social marginal borrowing cost of municipality i is equal to $N_i/N_j > 1$, where N_i denotes the population of municipality i, which participates in an amalgamation, and N_j is the total population of the post-amalgamation municipality, including municipality i. Hinnerich (2009) formulates the strength of municipality i's incentive to free ride as $Freeride_i = 1 - N_i/N_j \in [0,1]$. Jordahl and Liang (2010) employ the same concept, which they refer to as the "law of $1/n$."

This study employs Hinnerich's (2009) definition of the free-rider incentive associated with amalgamation and applying eligibility assessments of the Japanese LTCI. Under the LTCI system, the elderly bear the LTCI premium burden. Therefore, in this study, I change N_i and N_j from the total population to the elderly population and define the following relationship:

$$Eligibility_i = \alpha + \beta Freeride_i + u_i \qquad (1)$$

where $Eligibility_i$ is the eligibility ratio, defined as the number of eligible individuals divided by the number of category I insured. The parameter β represents the free-rider effect, and u_i represents the observed or unobserved eligibility ratio determinates. Considering the difference of eq. (1), I can write the equation as

$$\Delta Eligibility_i = \theta + \beta \Delta Freeride_i + v_i \qquad (2)$$

where Δ indicates the difference operator, representing the difference between the base fiscal year and the fiscal year before amalgamation. When the pre-merger municipality raises the eligibility ratio considerably before amalgamation, the municipality should owe the load.

[5] Gilligan and Matsusaka (1995, 2001), Bradbury and Crain (2001), Baqir (2002), and Bradbury and Stephenson (2003) empirically analyze the $1/n$ effect.

Therefore, this study assumes that the pre-merger municipality raises the eligibility ratio the FY before amalgamation. Then, all $Freeride$ of pre-merger municipalities more than 1 FY before amalgamation equals zero. Since $\Delta Freeride = Freeride$, eq. (2) can be written as follows:

$$\Delta Eligibility_i = \theta + \beta Freeride_i + v_i \qquad (3)$$

To address the issue of municipalities facing financial difficulties with controlling the assessments to balance the LTCI budget (raised by Hayashi and Kazama, 2008), I employ variables relating to the municipality's LTCI finances. The first variable is the LTCBF balance per category I insured person, and the second is the amount of FSF loan per category I insured person. In addition, I employ the LTCI premium for the category I insured because the municipality might control eligibility assessments, considering the premium already high and therefore, difficult to raise any further. Thus, eq. (3) can be written as

$$\Delta Eligibility_i = \theta + \beta_1 \Delta Freeride_i + \beta_2 LTCBF_i + \beta_3 FSF_i + \beta_4 LAT_i + \beta_5 premium_i + v_i \qquad (4)$$

where the fiscal condition of the LTCI is sound if *LTCBF* is high but is in poor shape if *FSF* is high. Therefore, the former is expected to have a positive and the latter a negative influence on the eligibility ratio change. The proportion of LTCI benefits financed from the municipality's general budget is compensated for by LAT disbursements. Therefore, I employ LAT per capita as an index of dependency on LAT revenue. Moreover, the high LTCI premium of the period indicates the lack of capacity to raise the premium in the future. Therefore, the amount of *LAT* and *LTCI premium* are expected to have negative influences on the eligibility ratio change.

3.2 *Data*

As mentioned in Section 2, the LTCI system is administered over a 3-year program management period. Important components of the LTCI system (e.g., eligibility levels, benefit limits at each level, and income levels for premium reduction) are often significantly different between periods. Furthermore, the premium is revised when a new period begins. Therefore, amalgamation scenarios preferably should be compared within the same management period,

considering that DID regression requires at least one difference estimation.

While both FY 2004 and FY 2005 amalgamations occurred in the second management period and were adequate for the selection of an appropriate treatment group, the former would require estimation of differences between FY2002 in the first management period and FY2003 in the second management period. Furthermore, FY 2002 data of LTCBF and FSF loan are available only at the aggregated prefecture level.[6] Therefore, FY 2004 amalgamations are not appropriate for regression analysis. For FY 2005, however, difference estimation is possible within the same management period, and municipality-level data are available. Then, I consider pre-merger municipalities that amalgamated in FY 2005 as the treatment group to test my hypothesis (i.e., a municipality that has opted to amalgamate would increase the number of eligible people immediately before amalgamation). Municipalities that have never merged form the control group. The treatment group comprises 798 municipalities and the control group 1,057 municipalities.[7]

From the above discussion, $\Delta Eligibility_i$ is the FY 2004 eligibility ratio minus the FY 2003 ratio. The data for $LTCBF_i$, FSF_i, LAT_i, and $Premium_i$ are captured from FY 2003. These variables are for FY 2003. Table 1 describes the summary statistics and their sources.

[Table 1 around here]

The average, minimum, and maximum eligibility ratios for FY 2003 are 14.95, 7.89, and 30.07, respectively. The highest eligibility ratio for a municipality is approximately 30% (for category I insured). The average LTCI premium per month in the second management period is 3,160 JPY. The difference between the highest and lowest premiums across municipalities is 4,157 JPY.

4 Estimation results

4.1 Parallel trend assumption

This study must test the parallel trend assumption to justify using the DID method. Figure

[6] The first management period is from FY 2000 to FY 2002, and the second from FY 2003 to FY 2005.

[7] The number of municipalities employed is lower than the total number of municipalities, because municipalities that jointly manage an LTCI system are excluded from this analysis.

1 shows the average change in eligibility ratio of the treatment and control municipalities. FY 2000 data of the eligibility ratio are available only at the aggregated prefecture level. Therefore, I employ the data from FY 2002.

[Figure 1 around here]

The black line indicates the treatment group and the light gray line indicates the control group. Figure 1 shows a similar trend between the control and treatment groups. Thus, I carry out a two-sample mean comparison test on the average change in eligibility ratio for each group. The t-values for the treatment and control municipalities are 0.759, 0.139, and 2.591 for FY 2001 to FY 2002, FY 2002 to FY 2003, and FY 2003 to FY 2004, respectively. The t-value is significantly different only from FY 2003 to FY 2004, that is, the fiscal year before amalgamation. The result suggests that my hypothesis is appropriate.

4.2 Baseline result

In this subsection, I show the regression results of eq. (4) as the baseline specification. The results of the baseline specification are shown in Table 2.

[Table 2 around here]

All estimated values of $Freeride$ are significantly positive. Therefore, smaller municipalities have an incentive to increase eligibility assessments before amalgamation and they did so. The point estimate of $Freeride$ in eq. (4) equals 0.134 and the average free-rider index is 0.29. Then, pre-merger municipalities increase the eligibility ratio about 0.04 percentage points more on average than do municipalities that have never merged.

$LTCBF$ is significantly positive, which means municipalities have sufficient surplus of LTCI finances to increase the eligibility ratio. On the other hand, the estimation results of FSF loan are negative but not significant. This is probably because the LTCI finances of most municipalities are in good shape in the period. The amount of LAT per capita is negative but not significant. Finally, the higher premium clearly shows a controlled increase in the eligibility ratio.

These results show, as Hayashi and Kazama (2008) conclude, that municipalities have

discretion to control eligibility assessments according to their fiscal conditions. Moreover, with the free-rider incentive at amalgamation, smaller municipalities adopt the opportunistic behavior of increasing the eligibility ratio. These results are constant regardless of pre-treatment control.

4.3 Robustness check

As discussed in Subsection 3.1, pre-merger municipalities should increase their eligibility ratios immediately before amalgamation because if they were to increase it considerably before the amalgamation date, the municipalities would owe the load themselves only. Therefore, pre-merger municipalities that merged in the latter half of FY 2005 had lower free-rider incentives to increase their eligibility ratios from FY 2003 to FY 2004 than did municipalities that merged in the first half of FY 2005. In this subsection, I rerun the regression by dividing the pre-merger municipalities by the amalgamation date. I divide pre-merger municipalities that merged in the first half of FY 2005 (from April 1 to September 30) and merged in the latter half of FY 2005 (from October 1 to March 31, 2006). The regression results are shown in Table 3.

[Table 3 around here]

The estimated values of $Freeride$ are significantly positive for the pre-merger municipalities that merged in the first half of FY 2005 and are not significant for the latter half of FY 2005. Moreover, the point estimate of $Freeride$ is 0.302, which is far higher than the result shown in Table 2. This result supports the timing of free-rider behavior in the increasing eligibility ratio.

4.4 Degree-of-eligibility changes

In the preceding regressions in this section, I use the total eligibility ratio. However, in this subsection, I change the eligibility ratio at each level. As described in Section 2, LTCI limits are set according to the level of eligibility. Figure 2 shows that in the second management period from FY 2003 to FY 2005, support limits are set according to the level of eligibility.

[Figure 2 around here]

The difference in the limits of care benefits is greatest between support need and long-term care need I, that is, 104,300 JPY per month. Moreover, individuals eligible for support could not use facility services. The difference in the unit cost between at-home care and facility care is very large. The average unit cost is 3,400 JPY for at-home care and 33,645 JPY for facility care.[8] Therefore, it is significant whether the insured are eligible for support or long-term care need I for the LTCI finances of the municipality. In this subsection, regressions are used to examine degree-of-eligibility changes in the pre-amalgamation municipality.

For all levels of care need, the municipality decides simultaneously whether to increase the eligibility ratio. Thus, the decisions possibly influence each other, and the ordinary least squares (OLS) regression cannot capture the unobserved relationship. Therefore, I employ simultaneous equation methods, such as seemingly unrelated regression (SUR) models, to estimate a system of equations involving contemporaneous correlations between the errors of different equations for the same period. The coefficients of regression by SUR and OLS are equal because both equations use the same explanatory variables; however, the standard errors and significance are different. After estimating SUR, I check the hypothesis of independence of both equations using the Breusch–Pagan (BP) test. The regression results are shown in Table 4.

[Table 4 around here]

The chi square of the BP test of independence is 209.610, which supports the use of SUR. The results show that the free-rider effect is positively significant for LTC needs I, II, and IV. Moreover, the point estimate of $Freeride$ in LTC need I is significant at the 1% level and is the highest value. Therefore, the pre-amalgamation municipality controls the eligibility ratio centering on LTC need I. From these results, pre-amalgamation municipalities seem to have upgraded the insured's eligibility from Support need to LTC need I.

5 Conclusion

This study identifies the discretion of municipalities to undertake eligibility assessments for

[8] These data were calculated from *The Annual Report on LTCI Programs 2003*, Ministry of Health, Labour and Welfare.

the LTCI program in Japan. Eligibility assessments for the Japanese LTCI program are conducted by an objective evaluation based on the physical and mental care needs of individuals. Under the assessments, universal services of long-term care are guaranteed. Therefore, the objectivity of LTC eligibility assessment is an important factor. However, Hayashi and Kazama (2008) point out that municipalities facing financial difficulties control eligibility assessments in order to balance the LTCI budget.

Using the idea of free-rider behavior provided by Hinnerich (2009) and Jordahl and Liang (2010), this study explores free-rider behavior of pre-merger municipalities with regard to eligibility assessment. The results based on DID regression show that the smaller pre-merger municipalities increase their eligibility ratios in the fiscal year before amalgamation. Free-rider incentives are significantly positive for a change in the eligibility ratio. The amount saved in the LCTBF is significantly positive, and the LTCI premium of category I insured is significantly negative for a change in the eligibility ratio. Therefore, municipalities have discretion to set their eligibility ratios and to increase their ratios before amalgamation. Moreover, the SUR regression results show that pre-amalgamation municipalities upgraded the insured's eligibility status from support need to LTC need I.

This study demonstrates a common-pool problem in which the newly created municipality subrogates the increased load of eligible individuals covered by the municipality before amalgamation. Moreover, it is shown that the Japanese LTCI system is not managed in accordance with the institutional design. If this situation were to persist, municipalities with poor LTCI finances would face the possibility of an increase in the number of insured who are not eligible for cover. This is a serious threat to the horizontal equity of the LTCI system in Japan.

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Table 1

Summary statistics

Variables	N	Mean	S.D.	Min	Max
Eligibility ratio in 2003 (%)	1855	14.95	2.84	7.89	30.07
Change in eligibility ratio (treatment)	798	0.65	0.81	-3.00	4.94
Change in eligibility ratio (control)	1057	0.56	0.69	-2.80	2.95
Free-ride	1855	0.29	0.38	0	0.99
LTCBF per category I-insured (1,000 JPY)	1855	9.24	8.49	0	52.05
FSF per category I-insured (1,000 JPY)	1855	0.17	0.87	0	10.05
LAT per capita (1,000 JPY)	1855	1.79	1.89	0	23.70
LTCI premium for category I-insured (1 JPY)	1855	3,159	561	1,785	5,942

Sources: Ministry of Health, Labour and Welfare, *The Annual Report on LTCI Programs 2003 and 2004, The Survey of the Long-term Care Facilities and Offices 2003*, The Statistics Bureau, Ministry of Internal Affairs and Communications

Figure 1

Average change in eligibility ratio (percentage point)

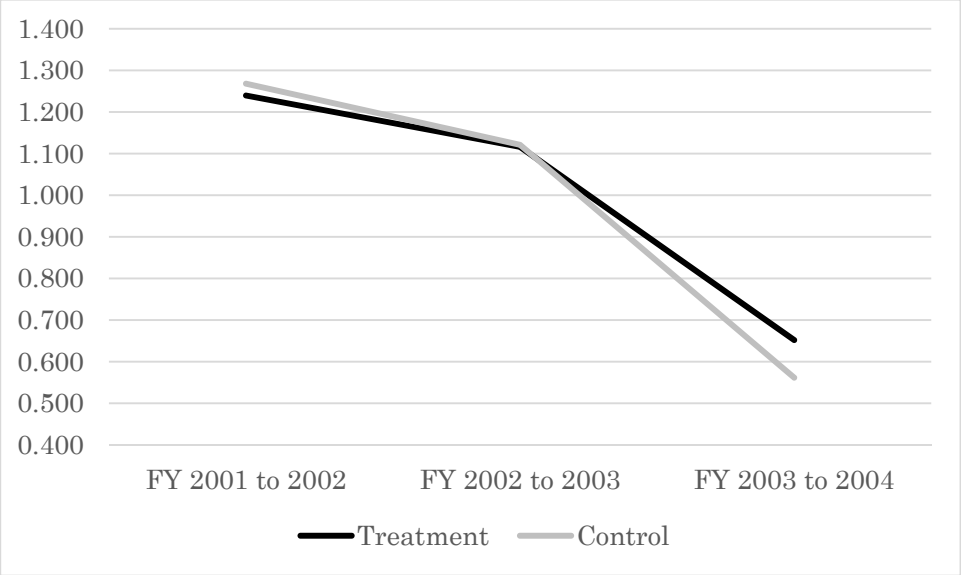

Table 2

Free-rider effect of smaller municipalities before amalgamation

	Estimation 1	Estimation 2	Estimation 3
Free-ride	0.120** (0.051)	0.132*** (0.051)	0.134*** (0.051)
LTCBF		0.012*** (0.002)	0.005** (0.003)
FSF loan		-0.013 (0.023)	-0.002 (0.024)
LAT			-0.021 (0.013)
Premium			-0.000*** (0.000)
Constant	0.565*** (0.020)	0.452*** (0.031)	1.280*** (0.138)
N	1855	1855	1855
R^2	0.004	0.024	0.053

Notes: ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.1 levels, respectively. Robust standard errors are shown in parentheses.

Table 3

Sample divided by date of amalgamation

	First half of FY 2005 From April 1 to September 30	Latter half of FY 2005 From October 1 to March 31
Free-ride	0.302*** (0.076)	0.058 (0.059)
LTCBF	0.005* (0.003)	0.006** (0.003)
FSF loan	-0.000 (0.029)	-0.004 (0.026)
LAT	-0.000 (0.014)	-0.023 (0.015)
Premium	-0.000*** (0.000)	-0.000*** (0.000)
Constant	1.073*** (0.163)	1.254*** (0.146)
N	1304	1608
R^2	0.049	0.051

Notes: ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.1 levels, respectively. Robust standard errors are shown in parentheses.

Figure 2

Support limits according to level of eligibility in second management period

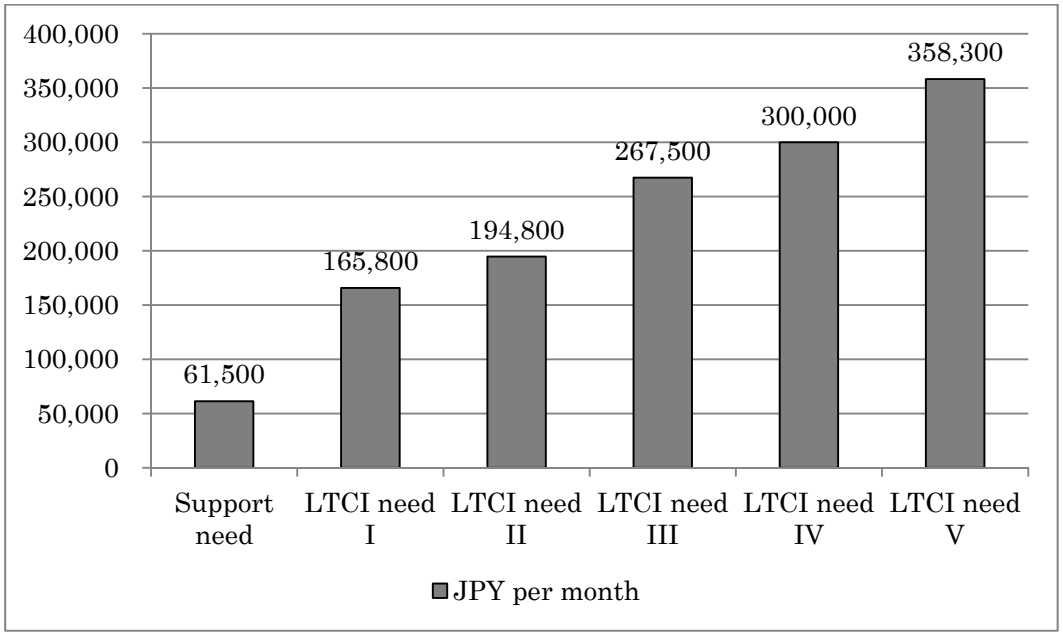

Table 4

Free-rider effect by degree of eligibility levels

	Support need	LTC need I	LTC need II	LTC need III	LTC need IV	LTC need V
Free-ride	-0.009	0.124***	0.088**	0.003	0.058**	0.037
	(0.038)	(0.048)	(0.034)	(0.029)	(0.027)	(0.024)
LTCBF	0.001	0.012	0.002	-0.001	0.001	-0.000
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
FSF loan	0.003	0.030*	-0.043***	-0.000	0,022**	-0.012
	(0.013)	(0.018)	(0.012)	(0.010)	(0.010)	(0.009)
LAT	-0.003	-0.018**	0.009*	0.002	-0.011**	0.001
	(0.006)	(0.007)	(0.005)	(0.005)	(0.004)	(0.004)
Premium	0.000*	-0.000***	-0.000***	-0.000	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	0.067	0.651***	0.079	0.138**	0.125*	0.018
	(0.083)	(0.105)	(0.074)	(0.063)	(0.059)	(0.052)
N	1304	1304	1304	1304	1304	1304
R^2	0.003	0.037	0.026	0.000	0.016	0.003
	Breusch–Pagan test 209.61***					

Notes: ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.1 levels, respectively. Robust standard errors are shown in parentheses.