

**The Role and Market Share of Nonprofit Organizations in the Quasi-market:**

**An Analysis of the Long-term Care Services Market in Japan**

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**Introduction**

In 2000, the long-term care insurance system (LTCS) in Japan introduced a quasi-market or mixed market for the first time. Subsequently, the market has grown rapidly with fierce competition among nonprofit, for-profit, and public providers. Several studies have examined the determinants of the market size of the three sectors in the United States, but little research has studied the factors affecting the market size of nonprofit and for-profit providers in Japan. It is important to examine the factors that are likely to promote nonprofit and for-profit providers in LTCS, especially focusing on citizen-driven nonprofits, because some of them are an important resource of informal services to supplement the formal LTCS for the elderly in need.

Therefore, we first discuss the reasons for focusing on nonprofit providers in LTCS. Second, we review previous studies about the market size of a mixed economy. Third, we explain the status of the LTCS market and characteristic features of each provider. Fourth, we present the framework of analysis and examine the determinants of the market size of nonprofit and for-profit providers in LTCS for home visit services.

**Reasons to focus on nonprofit providers in LTCS**

One of the focal points of quasi-market or mixed-economy research is comparing the performance of for-profits, nonprofits, and sometimes governments providing the same services. Theoretically, it is explained that in the case of products with asymmetric information, nonprofit products are more favorable than for-profit products, because nonprofit providers are restricted by nondistribution constraints and are not motivated to cut costs like for-profit providers in situations of “contract failure” (Hansmann 1980). Based on a survey examining more than 210 empirical studies on health care, it was identified that nonprofit ownership appeared to be linked with higher quality and accessibility for unprofitable patients (Schlesinger and Gray 2006). On the other hand, some discussions indicate that in a competitive market, nonprofit providers tend to resemble for-profit providers,

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pursuing profit maximization and cost effectiveness (Backman and Smith 2000, Weisbrod 1998). It is also pointed out that institutional pressures, including regulations and standards, made for-profit providers resemble nonprofit providers (Suda and Guo 2009).

The above discussions are very important to design effective formal services for the elderly, but it should be noted that the elderly person's life cannot be fully supported with only formal services. It is also important to consider extended services out of the quasi-market, because formal public services cover only a part of clients' needs under many institutional and financial constraints. Therefore, various informal services have been developed by nonprofit organizations historically to overcome insufficient public and commercial services. Several studies indicate nonprofit providers are more engaged in charitable or community services (e.g., Clement et al. 2002, Schlesinger et al. 2003). The case is similar in Japan, especially for citizen-driven nonprofit providers, as we will mention later. However, the distribution of nonprofit providers is different in each region. Considering the crisis facing the present social security system, because of a super-aged society and serious government fiscal deficit in Japan as well as in other developed countries, it is meaningful to study the factors that foster nonprofit providers engaged in providing informal services for the elderly out of LTCS. Therefore, we examine the determinants of the market share of nonprofit and for-profit sectors in LTCS.

## **Previous Studies**

The studies that empirically examine the size of nonprofit and for-profit providers, sometimes including the government, are as follows. Hansmann (1987) investigates nursing homes, hospitals, primary and secondary education, and vocational schools, concluding that the size of the nonprofit sector is bigger in areas with more tax incentives (e.g., local sales tax and corporation income tax) for nonprofit organizations, and the size of the for-profit sector is bigger in areas with higher market potential, represented by population growth. That indicates the size of the nonprofit sector is smaller in areas where the charitable contribution amount is larger<sup>1</sup>. Gulley and Santerre (1993) conclude that the size of the nonprofit sector in hospitals has a positive correlation with the rate of local corporation income tax and property tax, but no significant correlation with income and population<sup>2</sup>.

Ben-Ner and Hoomissen (1992), investigate social service, primary and secondary education, and childcare, and examine the effects of sector-specific demand and supply factors<sup>3</sup>. They consider nonprofit providers are prominent in two types of goods: trust goods and collective goods; the former are non-rival goods that are difficult for stakeholders to evaluate, and the latter are public, charitable, and certain mixed public-private goods. As for demand, they consider the larger the market, the more favorable a nonprofit's trust goods are, because it is difficult for users to make judgments owing to asymmetric information. On the other

hand, nonprofits generally provide collective goods where the demand is too small for diverse tastes to be satisfied by the standard products of many for-profit providers. Moreover, it is explained that the demand for nonprofit products is revealed by high-demand stakeholders (e.g., the high income and better-educated group) who are dissatisfied with collective goods provided by the for-profits or government, because these goods are targeted at average consumers or median voters. On the other hand, poorer and less educated stakeholders have a demand for goods provided by nonprofit providers, because their ability to choose a reliable for-profit provider for trust goods is lower. As for supply, it is explained that members of socially cohesive groups have an advantage in forming nonprofit organizations and controlling them with lower cost.

Based on the above considerations, Ben-Ner and Hoomissen (1992) assume as follows: (1) in large markets, nonprofit providers are relatively important suppliers of trust goods but not collective goods; (2) in areas where the population has greater income and better education, the nonprofit sector's presence is larger for collective goods, but the effect is intermediate for trust goods; (3) demand heterogeneity, e.g., unequal distribution of income and social, cultural, and religious differences enhances nonprofit provision; and (4) social cohesion enhances nonprofit provision. The results are complex and diverse, depending on the industry with the nature of trust goods or collective goods.

For example, social services are considered mixed goods comprised of trust goods and collective goods and it is explained that the results are not as clear as suggested in the assumptions as follows. Income has a positive impact but urbanization has a negative impact on for-profit providers. In the case of nonprofit providers, both higher education and poverty have a positive impact, but racial heterogeneity has a negative impact. The number of religious organizations has a positive impact, but the number of membership organizations has a negative impact on nonprofit providers. However, considering the results of all industries, the authors conclude that overall, the nonprofit sector is relatively larger in communities with a smaller market size, more heterogeneity, and more social cohesion.

Each result of the above study, which examined the determinants of market size, including tax incentives, demand growth/height and heterogeneity, inequality, and philanthropic support/social cohesion are mixed and not consistent (Table 1). Therefore, to extend the studies, we examine the determinants of market share in LTCS considering specific conditions in Japan.

Table 1. Extracts of Previous Studies

Hansmann (1987)			Gulley and Santerre(1993)			Ben-Ner and Hoomissen(1992)		
Tax Exempt	Local tax rate	+	Tax Exempt	Local tax rate *	+	Market Size	Income	HS-
Demand Growth	growth rate of target age Population	NH-	Demand factor	Population, income, Medicare coverage	+	Demand Height	income, education +16	HS- SS +
Government Competitor	Share of government service	NH+ HP-				Demand Heterogeneity	racial heterogeneity education +16, poor	SS- SS + HS- SS +
Philanthropic Support	Ratio of contribution to income	VS-				Social Cohesion	religious organization membership organization population density	HS+ SS + SS-
			Institutional factor	Year of rate regulation	+	Others	urbanization	HS+

1) + is positively significant. – is negatively significant.

2) Local tax includes sales and corporation tax.

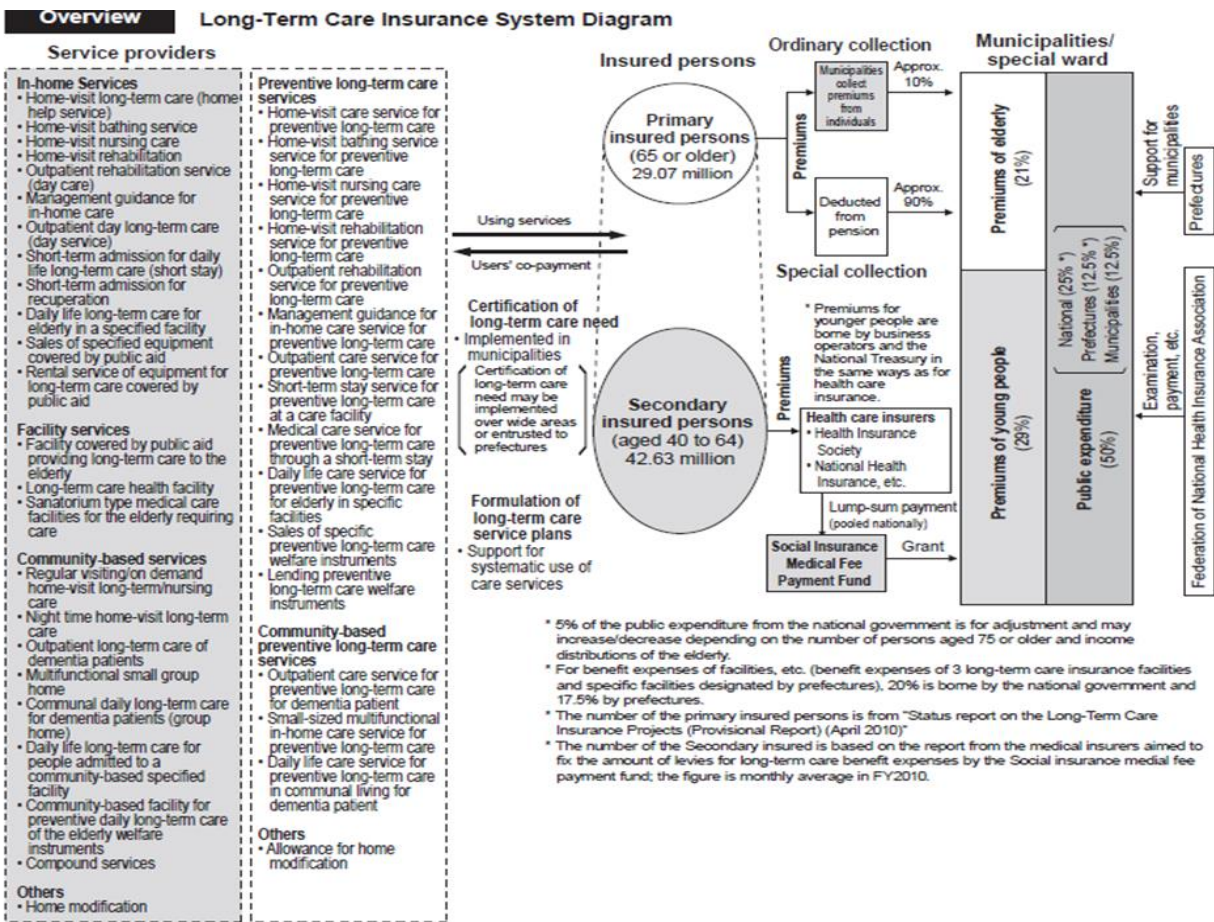
3) NH=nursing home, HP=hospital, VS=vocational school, HS=health service, SS=social service.

### The Long-term Care Services Market and Nonprofit Organizations in Japan

A quasi-market is a public service market in which the state allows participation by independent providers competing with one another for custom; the state, however, retains control of the service market in order to prevent inequity due to low incomes and market failure due to poor information. These kinds of changes have been a global movement, including in social democratic welfare states (Le Grand 2003:10). LTCS is the first quasi-market introduced in Japan.

LTCS is social insurance that provides a variety of in-home care, facility, and community-based services. In-home care services include home visit care, home visit nursing care, day service, rehabilitation, and so on; facility services include nursing home, care health facility, and sanatorium; whereas community-based services include group home and special home visits (Figure 1). The cost of LTCS is shared by national and local governments and taxpayers. LTCS has grown rapidly in a short time since it was established in 2000. For example, the total cost of LTCS increased by 3.6 trillion yen to 8.9 trillion yen in 2012 (Table 2) and the number of users increased by 1.5 million to 4.2 million between 2000 and 2011 (Table 3).

Figure 1



Source:

MHWL(2012:229)

Table 2

**Detailed Data 6** Changes in Total Amount of Long-Term Care Expenses (¥100 million/Year)

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011 (Budget)	2012 (Budget)
36,273	45,919	51,929	56,891	62,025	63,957	63,615	66,719	69,497	74,306	78,204	83,223	89,217

Source: "Status Report on the Long-term Care Insurance Projects", Health and Welfare Bureau for the Elderly, MHLW  
The figures for FY2011 and FY2012 are estimated from the budget amount.

Source: MHWL(2012:234)

Table 3

**Detailed Data 3** Changes in Number of Long-Term Care Service Users

	Services provided in April of each year											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
In-home services (including preventive long-term care services)	971,461	1,419,344	1,723,523	2,014,841	2,314,883	2,505,636	2,546,666	2,573,797	2,685,115	2,782,828	2,941,266	3,062,232
Community-based services (including preventive long-term care services)	-	-	-	-	-	-	141,625	173,878	205,078	226,574	253,769	273,247
Facility services	518,227	650,590	688,842	721,394	757,593	780,818	788,637	814,575	825,155	825,835	838,279	843,016
<b>Total</b>	<b>1,489,688</b>	<b>2,069,934</b>	<b>2,412,365</b>	<b>2,736,235</b>	<b>3,072,476</b>	<b>3,286,454</b>	<b>3,476,928</b>	<b>3,562,250</b>	<b>3,715,348</b>	<b>3,835,237</b>	<b>4,033,314</b>	<b>4,178,495</b>

Source: "Status Report on the Long-term Care Insurance Projects", Health and Welfare Bureau for the Elderly, MHLW

Source: MHWL(2012:234)

LTCS is open to any organization that holds the legal status and meets the criteria. Therefore, LTCS providers consist of nonprofit, for-profit, and government providers. However, the nonprofit sector in Japan is not monolithic like in the U.S., but consists of several corporations. These corporations are divided by their origin roughly into government-driven nonprofits, citizen-driven nonprofits, and semi-commercial nonprofits. The government-driven nonprofits include *shakaifukusi-kyogikai* (CSW or Council for Social Welfare) and *shakaifukushi-hojin* (SWC or Social Welfare Corporation). CSW is a private but quasi-governmental corporation organized in every municipality to coordinate public welfare services. SWC is a private agent for the government to deliver welfare services. It is given the most favorable tax benefits with strict government directions for it is a highly beneficial to public. The citizen-driven nonprofits are represented by *tokutei-hieiri-katudo-hojin* (SNC: Specific Nonprofit Corporation), a legal status introduced in 1998 for citizen-driven, generally small-sized, nonprofit organizations. *Kyodo-kumiai* (COOP: Cooperative) and *iryō-hojin* (MEC: medical corporation) are nonprofit organizations, but considered to be semi-commercial. The cooperative is rooted in a civic engagement, but a large part of the present cooperatives are agricultural and consumer COOP, which are closer to business in Japan. The medical corporation is legally a nonprofit organization running hospitals and clinics, but is not prohibited from distribution of residual property. Nonprofit and for-profit corporations can be represented as shown in Figure 2.

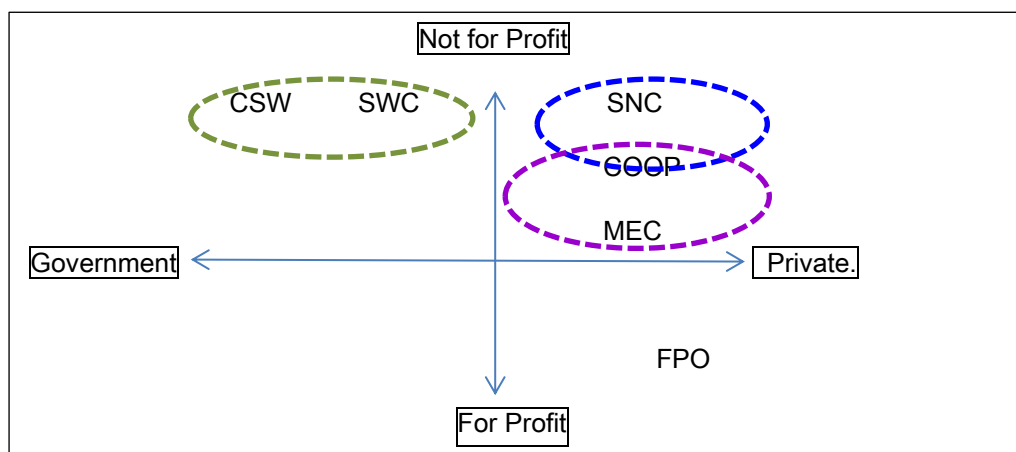


Figure 2. Nonprofit and for-profit organizations in Japan

Before LTCS was introduced, the public elderly care service providers were limited to local governments and government-driven nonprofit providers, that is, CSW and SWC. The entry regulation was to secure quality services. However, the regulation had led to a closed supply system with significant ineffectiveness and consequently, irresponsiveness to users. To meet the challenge, LTCS was designed with a market

component, which was expected to bring service effectiveness and responsiveness through competition among diverse providers. The introduction of LTCS opened the door to a quasi-market, especially for in-home services.

Since then, LTCS has succeeded in increasing the availability of elderly care services in a very short time. However, it is clear that the quantity and quality of LTCS is not sufficient as a whole to support the elderly in need. As an institutional service, LTCS requires strict regulations and standards for providers. Further, LTCS restricts service usage, depending on the user's physical condition and help provided by family members. As a result, there are many frail elderly who have to deal with troubles such as cooking meals, house cleaning, shopping, and going to hospitals without any assistance. Similarly, a lot of family members suffer from the burden of supporting the elderly even if they use the maximum LTCS<sup>4</sup>.

In these situations, some citizen-driven nonprofit providers are engaged in extension services out of LTCS. Their extension services originate in voluntary mutual community services dating back to the 1970s or 1980s. At that time, there were almost no public or commercial care service providers for the elderly. When LTCS was introduced, some of those groups that had been named as *Jumin sanko-gata zaitaku fuksi sabisu dantai* (in-home service organization by community participation), registered as LTCS providers with SNC status. Nowadays, around 60% of them are engaged in care services of LTCS, along with mutual community assistance services (ZSK 2009). There are many citizen-driven nonprofit LTCS organizations that provide community services based on voluntary work. For example, 72.4% of SNC or citizen-driven nonprofit LTCS providers are engaged in community service besides formal LTCS services (Hongo et al. 2011). The size of community service is not big at the macro level, but some citizen-driven nonprofit providers try to provide community services as much as institutional LTCS services (Kanaya 2012).

LTCS encouraged the entry of new service providers and the number has increased sharply (Table 4). For example, the number of home-visit care providers increased 2.5 times, and the number of day care service providers increased 4.1 times from 2000 to 2011 (MHLW 2012)(Table 5).

At the same time, the distribution of each service provider has changed, too. In the home visit care service, the share of formerly dominant CSW and SWC has decreased from 43.2% in 2000 to 24% in 2011. On the other hand, that of for-profit providers increased from 30.3% to 58.6%. The share of medical corporations in the home visit care service decreased from 10.4% to 6.5%, and that of cooperatives decreased from 4.6% to 3.0%. The share of SNC increased from 2.1% to 5.6% during the same period.

Nowadays, for-profit providers take the largest portion of many in-home services. They also seem to be much more skilled in extending business than overall nonprofit providers. Government-driven nonprofit providers, CSW and SWC, seem to be losing their long-standing dominance. As for SNCs, their share is limited,



but the number of SNCs has increased six times. When LTCS was started, citizen-driven nonprofit providers were expected to lead in-home services because they were considered to provide empathic care based on mutual assistance or sometimes self-help. However, in reality, the role of citizen-driven nonprofit providers is not big in amount. Therefore, the evaluation regarding market competition is mixed.

**Table 4**

**Detailed Data 7** Changes in Number of Long-Term Care Service Providers (service provider)

As of the end of April of each year

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>In-home Services</b>												
Home-visit long-term care	11,475	13,620	15,260	17,592	20,849	24,795	26,599	27,602	26,955	26,741	27,476	28,782
Home-visit bathing service	2,431	2,838	2,846	2,887	2,945	2,916	2,837	2,695	2,449	2,407	2,391	2,434
Home-visit nursing care	31,984	57,836	59,765	62,774	65,264	67,458	69,581	62,440	64,003	64,955	66,391	67,922
Home-visit rehabilitation	22,491	44,460	46,396	49,440	52,029	54,356	56,562	50,059	51,885	53,105	54,693	56,289
Management guidance for in-home care	72,970	133,366	137,049	141,566	145,142	147,967	151,606	150,343	153,510	154,870	156,895	158,074
Outpatient day long-term care	7,133	8,787	10,131	11,670	14,041	17,245	19,973	21,615	22,844	24,188	26,261	28,949
Outpatient rehabilitation service	4,594	5,591	5,691	5,828	5,969	6,238	6,330	6,591	6,659	33,447	38,094	38,797
Short-term admission for daily life long-term care	4,080	4,825	5,077	5,330	5,649	6,115	6,530	7,019	7,395	7,653	7,871	8,174
Short-term admission for recuperation	5,031	6,585	6,667	6,797	6,823	6,884	6,588	6,298	5,972	5,789	5,710	5,659
Daily life care for elderly in specified facility	235	313	412	551	800	1,285	1,744	2,585	2,896	3,047	3,281	3,551
Rental service of equipment for long-term care covered by public aid	3,241	5,067	5,968	6,902	7,937	8,692	9,043	8,743	8,053	7,319	7,166	7,316

Source: "WAMNET"

**Table 5 Share of Home Visit Providers of LTCS**

Year	Total (%)	Local Gov.	Nonprofit					For-profit	Others
			CSW	SWC (ecl.CSW)	MEC.	COOP	SNC		
2000	9,833 (100.0)	652 (6.6)		4,250 (43.2)	1,023 (10.4)	452 (4.6)	208 (2.1)	2,975 (30.3)	270 (2.7)
2007	21,069 (100.0)	157 (0.7)	1,863 (8.8)	3,729 (17.7)	1,522 (7.2)	746 (3.5)	1,242 (5.9)	11,392 (54.1)	418 (2.0)
2011	21,315	113 0.5	1,553 (7.3)	3,550 (16.7)	1,395 (6.5)	641 (3.0)	1,196 (5.6)	12,484 (58.6)	383 (1.8)

Source: MHLW (various years)

The distribution of each service provider is different by region. In 2007, the proportion of for-profit providers was highest in Tokyo Pref. (72.0%) and lowest in Shimane Pref. (19.6%). The proportion of CSW was highest in Nagano Pref. (27.5%) and lowest in Osaka (0.9%); and that of SWC was highest in Shimane Pref. (36.8%) and lowest in Tokyo Pref. (10.4%). It seems that generally, the proportion of for-profit providers is more in urban areas and that of government-driven nonprofit providers is more in rural areas. The percentage of SNC was highest in Kanagawa Pref. (11.8%) and lowest in Yamanashi Pref. (1.5%). However, the



distribution pattern of SNC is not as clear as that of for-profit and government-driven nonprofit providers. What determines the differences in the market presence of various service providers? To answer this question, we examine the determinants as follows.

## **Method and Analysis**

We empirically examine the determinants of the market share of home visit care services in LTCS served by nonprofit and for-profit providers. The target service is home visit care, including housekeeping and nursing care, which are considered basic support for housebound seniors in need. The focus on home visit care services is important for three main reasons. First, it is one of the most popular residential care services and it represents the largest proportion of total in-home services. Second, it is a growing market open to new competitors in LTCS, including citizen-driven nonprofit and for-profit providers. Third, it originated in the 1980s and was developed by grassroots voluntary organizations to assist neighbors who were unable to take care of older family members on their own.

The target service providers for home visit care services are for-profit and nonprofit providers. The local government is omitted, because its presence in this category of services is fairly limited. Unlike previous studies that deal with nonprofit as one sector, nonprofit providers are divided into five categories for our purpose: CSW, SWC, SNC, COOP, and MEC, because of the reasons mentioned above.

The framework of analysis follows the ideas of Hansmann (1987) and Ben-Ner and Van Hoomissen (1992). The factors that are assumed to have an impact on the market share of nonprofit and for-profit providers are market potential, demand heterogeneity, and charity environment or civic engagement.

Considering market potential, for-profit providers are likely to enter areas that have higher market potential, including market size based on demand. On the other hand, nonprofit providers are likely to enter the areas with lower market potential. In addition, among the latter, government-driven nonprofit providers, whose mission is to supplement underserved areas as a government-supported institution, are likely to enter disadvantaged areas more than other providers are.

Where demand heterogeneity is concerned, nonprofit providers are more likely to enter areas with heterogeneous demand, e.g., demand based on varied income and education levels. Considering government-driven nonprofit providers are public providers in a way, citizen-driven nonprofit providers are likely to enter areas with heterogeneous demand.

Regarding the charity environment of an area, it is likely that nonprofit providers are more established in areas with more active civic engagement. It should be noted that there are two kinds of volunteers in Japan: civic volunteers with private initiative as understood in the Western context and public cooperation or embedded volunteers who support governmental services<sup>5</sup> (e.g., Haddad 2007). Because these two kinds of volunteers are dissimilar in nature, their impacts are considered differently. Citizen-driven nonprofit providers are likely established more in the areas with more active private initiative volunteers, whereas government-driven nonprofit providers are likely to be encouraged to enter areas with more active public cooperation volunteers.

Tax incentives are not considered here, for the local tax rate on sales, property, and corporations are quite similar in Japan. In heterogeneity, racial heterogeneity and poverty rate are also not considered, because Japan is relatively ethnically homogeneous and the wealth gap is not big either, as compared with the U.S.

## Data and Variables

The dependent variable is the market share of the five types of nonprofit providers and for-profit providers in LTCS. That is represented by the percentage of each provider in the number of total providers. The data source is *Kaigo sabisu shisetu/jjgyosho chosa* (Survey Report of LTCS Providers) by the Ministry of Health, Welfare, and Labor (MHWL) from 2000 to 2007, which includes prefectural cross-section data. The percentage of providers may not be a completely accurate measure of their market share, but that is used because of the impossibility of gaining better data, e.g., users or employment. However, it is reported that the average annual LTCS income of each home visit service provider including CSW, SWC, medical corporation, for-profit, and other is fairly similar<sup>6</sup>, therefore the size difference of each nonprofit and for-profit provider is considered to be relatively small.

Independent variables adopted and hypotheses are as follows.

Market potential is represented by: (1) the ratio of target population over 75 years in age, (2) the recipient ratio of LTCS in the population of those over 65 years, (3) population density, and (4) income per capita. Those may reflect market size based on demand for LTCS. The size of the target age population and recipients are considered to increase the market size. The target age is chosen as 75 years, because the healthy life expectancy is around 75 in Japan. Population density is a proxy for urbanization, which is also considered to increase the number of users. An average prefectural income per capita is chosen for income. Higher income implies greater demand for normal goods<sup>7</sup>; therefore, market size may be larger in areas with higher income.

Demand heterogeneity is represented by: (4) income per capita and (5) the ratio of university graduates to the total population. It is considered that higher education and income tend to make people dissatisfied with the standard services provided by many for-profit and government-driven nonprofit providers, whose role is close to that of public providers. Therefore, citizen-driven nonprofit providers are likely to enter areas that have more demand heterogeneity. However, considering that market size may affect nonprofit provision positively in collective goods and negatively in trust goods, the effect may depend on the gradation of both goods in home visit services.

Charitable environments are represented by: (6) participation rate in civic volunteer activity and (7) consultation activities of the local welfare commissioner. Charitable environments are considered in the two ways mentioned earlier. The participation rate in civic volunteer activity is the percentage of people who attended any volunteer activity in the previous year. Local welfare commissioner (referred to as LWC hereafter) is an official welfare guard volunteer appointed by MHLW. The number of LWCs is allocated according to a proportional distribution; therefore, the average number of consultations per commissioner is chosen as the proxy. Citizen-driven nonprofit providers are likely to enter areas with more civic voluntary activity and government-driven nonprofit providers are likely to enter areas with more LWC activity.

One-way and two-way panel models are used to estimate the effects on market share. The models are fixed-effects tested against pooled and random-effects. The basic statistics are presented in Table 6.

**Table 6 Basic Statistics and Sources**

	Average	Median	Maximum	minimum	S.D.	Obvs.
( Dependent Variables)						
SNC	3.7	3.5	11.8	0.0	2.4	376
Cooperative	4.7	4.3	14.4	0.0	2.5	376
CSW	22.1	22.7	47.5	2.2	8.4	376
SWC ( not CSW )	17.8	17.2	50.0	0.7	8.8	376
Medical Corporation	9.8	8.7	27.9	2.8	4.4	376
For-profit	36.9	36.1	74.5	8.3	15.0	376
( Independent Variables )						
Population+75	9.7	9.7	15.4	4.8	2.1	376
LTCS recipient	105.2	108.3	162.6	41.4	26.0	376
Pop. Density	645.5	274.6	5833.8	71.0	1119.9	376
Income	275.5	276.0	457.0	200.0	40.7	376
Higher Education	13.2	12.3	26.8	7.2	4.0	376
Civic Volunteer	29.7	29.9	40.1	18.4	4.4	376
Consultation of LWC	44.2	41.1	103.7	23.7	15.3	376

**Data Source**

Population+75, Pop. Density:

MIC, *Kokusei Chosa* (Census) and *Suikai Jinko* (Estimated Population)

LTCS recipient: MHLW, *Kaigo-hoken jigyo jokyohokoku* (Report of LTCS Business' State)

Income: Cabinet Office, *Kenmin Keizai Keisan* (Prefectural Economic Accounting)

Higher Education: MIC, *Kokusei Chosa* (Census)

Civic Volunteer: MIV, *Shakai Seikatu Kihon Chosa* (Basic Survey of Social Life)

Consultant of LWC: MHLW, *Sakai Fukushi Gyosei Hokoku-rei* (Report of Social Welfare Administration)

**Results**

The results are presented in Table 7. Considering market potential, the market share of SNC (hereafter referred to as SNC, other dependent variables are referred to in the same way) has a positive correlation with the variable, population+75 and negative correlation with income. Both CSW and SWC have a positive correlation with population density, but negative correlation with the variable, LTCS recipient; and SWC has a negative correlation with income. COOP has a negative relation with LTCS recipient. MEC has a positive correlation with population+75 and population density, but negative correlation with LTCS recipient. On the other hand, the market share of for-profit provider (FPO) has a positive correlation with population+75 and LTCS recipient but negative correlation with population density.

The results do not always fit the hypotheses, but it is indicated partially that for-profit providers tend to enter areas with relatively higher market potential, except for urbanization. Focusing on the target age population and recipient rate of LTCS, for-profit providers seem to enter areas with more potential users, which may indicate larger market size. On the other hand, the nonprofit sector seems to enter areas with relatively less market potential. As for income, SNC and SWC of the nonprofit sector have a larger market share in areas

with lower income. As for the recipient rate of LTCS, CSW, SWC, COOP, and MEC have a larger presence in areas with a low recipient rate of LTCS.

Some results go against the hypotheses, too. SNC and MEC are larger in areas where the target age population is higher. CSW, SWC, and MEC are larger in highly populated areas, whereas FPO is smaller in these areas. One of the reasons for this may be that highly populated areas are considered to have a greater number of young people than other areas; therefore, the market potential for elderly care services is relatively small in these urban areas. Those may suggest that the hypothesis should be reconsidered.

Looking at demand heterogeneity, SNC has a positive correlation with higher education but negative correlation with income. SWC has a negative correlation with both higher education and income. COOP and MEC have a negative correlation with higher education.

The results do not always fit the hypotheses, but it is indicated partially that citizen-driven nonprofit providers tend to enter areas with more demand heterogeneity, whereas government-driven nonprofit providers tend to enter areas with less demand heterogeneity. Focusing on the educational level, it is indicated that only SNC from the citizen-driven nonprofit sector is larger in areas with more heterogeneous demand. On the other hand, SWC of the government-driven nonprofit providers is large in areas with lower income and higher education. The effect of income is not very clear, probably because the proxy represents market potential, too.

FPO has a positive correlation with higher education. The result is against the demand heterogeneity hypothesis, but is in accordance with the consideration for trust goods; that is, less educated stakeholders choose nonprofit products because of asymmetric information, which also means that well-educated stakeholders do not exclude for-profit products because these stakeholders have the ability to choose a reliable product regardless of the provider's organizational form.

Regarding charitable environment, SNC and COOP have a positive correlation with civic volunteer activity but negative correlation with the LWC's consultation activity. With civic volunteer activity, CSW has a positive correlation and SWC has a negative correlation. COOP and MEC have a negative correlation with the LWC's consultation activity. FPO has a negative correlation with civic volunteer activity but positive correlation with the LWC's consultation activity.

**Table 7 Results of Estimation**

	SNC		COOP		CSW		SWC		MEC		FPO	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
Population +75	0.383	0.000 ***	-0.072	0.623	-1.421	0.286	0.782	0.118	0.299	0.089 *	1.054	0.004 ***
Recipient LTCS	-0.002	0.791	-0.009	0.100 *	-0.098	0.000 ***	-0.101	0.000 ***	-0.019	0.000 ***	0.252	0.000 ***
Population Density	-0.002	0.166	0.000	0.793	0.016	0.000 ***	0.009	0.017 **	0.008	0.000 ***	-0.029	0.000 ***
Income	-0.015	0.003 ***	0.006	0.265	-0.001	0.930	-0.064	0.001 ***	-0.008	0.771	0.030	0.176
Higher Education	0.968	0.000 ***	-0.214	0.039 **	-0.375	0.524	-2.126	0.005 ***	-1.808	0.000 ***	3.335	0.000 ***
Civic Volunteer	0.089	0.006 ***	0.154	0.000 ***	0.727	0.000 ***	-0.438	0.000 ***	-0.016	0.829	-0.580	0.000 ***
LWC Consultation	-0.025	0.001 ***	-0.022	0.023 **	0.003	0.705	-0.017	0.599	-0.026	0.053 *	0.155	0.002 ***
C	-8.742	0.003	3.702	0.037	15.261	0.335	79.210	0.000	31.104	0.000	-22.850	0.032
Adjusted R <sup>2</sup>	0.833		0.164		0.951		0.889		0.901		0.948	
n	376		376		376		376		376		376	
one way/ two way	one way (c.s.)		one way (c.s.)		two way		one way (c.s.)		one way (c.s.)		one way (c.s.)	
fixed/random	fixed		random		fixed		fixed		fixed		fixed	

\*\*\* is 1% significant, \*\* is 5% significant and \* is 10% significant.

The results do not always fit the hypotheses, but it is indicated partially that citizen-driven nonprofit providers tend to enter areas with more private initiative volunteer activity and government-driven nonprofit providers tend to enter areas with more public cooperation volunteer activity, though this does not hold for CSW.

It should be noted that citizen-driven nonprofit providers are more established in areas with more active private initiative volunteers, but less active public cooperation volunteers. The distribution of FPO is the reverse of this. That may indicate the fairly large differences in charitable environments between areas with more citizen-driven nonprofit and more for-profit providers.

The overall results indicate, although not in all cases, that (1) the market shares of both citizen-driven and government-driven nonprofit providers are relatively large in areas with more unprofitable market conditions (lower proportion of service recipients and lower income); (2) the market share of citizen-driven nonprofit providers seems larger in areas with more diverse needs, which are represented by a higher educational level, as compared to the market share of government-driven nonprofit organizations in these areas; and (3) the market share of citizen-driven nonprofit organizations tends to be larger in areas with more private initiative

volunteers and less public cooperation volunteers, whereas that of for-profit organizations tends to be in the opposite direction.

While these results support some results of previous studies, there are also some new findings associated with the Japanese quasi-market. First, nonprofit providers tend to enter areas with lower market potential, but there may be a difference between citizen-driven nonprofit and government-driven nonprofit providers. Second, citizen-driven nonprofit providers tend to respond more to heterogeneous demand than do government-driven nonprofit providers, but the difference between nonprofit and for-profit providers is not very clear. The reasons for these results are likely related to the differences in the nature of the nonprofit sector in Japan and the U.S.

### **Conclusion and Policy Implications**

We reviewed the role of nonprofit providers in a quasi-market, considering the specific nature of several nonprofit providers in Japan, in contradistinction to for-profit providers. We then examined the determinants of market share of LTCS and explored that the nonprofit sector tends to enter areas with less market potential and the citizen-driven nonprofit providers are established more areas with higher private initiative civic voluntary activity.

The policy implications derived from these results are that the current governmental support for citizen-driven and government-driven nonprofit organizations needs reconsideration. Both nonprofit providers enter areas with lower market potential, and the latter seem to be more at a disadvantage than the former, but the difference is not very significant. However, the former receives much lower support than the latter, because the latter is supposed to serve highly public interests by convention since the 1950s. The aforementioned results question this assumption. In addition, it should be noted that promotion of civic engagement with private initiative is crucial for the growth of citizen-driven nonprofit providers. If it is assumed that citizen-driven nonprofit providers, which may provide informal community services as well as formal LTCS services, have an important role in securing social support for the elderly as a whole, some policies to encourage them are required. Considering the increasingly complex social needs of contemporary families, the role of citizen-driven nonprofit organizations will be more important in the years to come.

On the other hand, this article has some limitations. As mentioned earlier, citizen-driven nonprofit providers are struggling in the stiff market competition of LTCS, and it is true that the nonprofit providers' distinctiveness and legitimacy in quasi-markets is questionable to some extent. In addition, the situation is changing every year. Further efforts are required to investigate the reality.



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- <sup>1</sup> The model is estimated in weighted least square logit regression. The market share is calculated by bed or enrollment.
  - <sup>2</sup> The equations are estimated in maximum likelihood method. The market share is calculated by bed.
  - <sup>3</sup> The equations are in the Cobb-Douglas form. The market size is employment.
  - <sup>4</sup> According to *Syugyo-kozo kihon chosa* (Employment Structure Statistics), 145,000 workers left their jobs in 2006 for elder family's care.
  - <sup>5</sup> The percentage of embedded volunteers is more than that of civic volunteers even today.
  - <sup>6</sup> The average annual income of LTCS is between 2,133,000 yen to 2,683,000 yen (MWHL 2008).
  - <sup>7</sup> The users are charged 10% of LTCS fee.

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