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**Nonprofit and For-profit Providers
in Japan's At-home Care Industry:
Evidence on Quality of Service and Household Choice**

Haruko Noguchi and Satoshi Shimizutani

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By

Haruko Noguchi and Satoshi Shimizutani[1]

Abstract

In 2000, government deregulation along with the introduction of the long-term insurance scheme for the first time allowed for-profit providers of at-home care for the elderly to compete directly with nonprofit operators. According to the contract failure hypothesis, we would expect consumers to prefer nonprofit providers over their for-profit counterparts as a result of information asymmetry and non-distributional constraints. This study takes advantage of household level data to examine whether households' choice of care provider is biased toward nonprofits. We find that nonprofit providers to command a larger market share, but this is at least partly explained by having operated in the market longer and by continuing restrictions in medical and institutional care that confer various advantages on nonprofit providers. However, we do find that user with better knowledge of providers tend to favor for-profit providers, suggesting that measures to reduce information asymmetries may help to provide a more level playing field.

1. **Introduction**

Do consumers prefer nonprofit or for-profit services? This classical and frequently debated issue is of considerable interest both for academics and policy-makers. It became of very practical interest in Japan following the introduction of public long-term care insurance and deregulation of the market for at-home care for the elderly in the spring of 2000 (Mitchell, Piggott and Shimizutani 2004). While for-profit operators had been allowed to offer their services previously, users were not reimbursed, meaning that only the wealthy were able to afford them and the market was accordingly small. Everyone else was assigned to nonprofit providers as part of the government welfare policy. The introduction of the long-term insurance scheme for the first time pitched for-profit and nonprofit providers head to head, with users free to choose and having to make copayments of 10 percent of the cost, no matter what type of provider they chose (as long as it is government-approved).

The government's policy was based on the expectation that the entry of for-profits would contribute toward making the market more competitive. However, it should be noted that this outcome is not a foregone conclusion. If consumers' preferences are biased toward nonprofit services, market participation of for-profits will have little effect on competition. One possible explanation of this potential outcome is the "contract failure" hypothesis (Hansmann 1980): If consumers cannot observe the quality of services in advance, they may prefer to choose nonprofit providers. It may be perfectly rational for them to do so because of "non-distributional constraints," i.e. that fact that nonprofit operators are not allowed to distribute any operating surpluses among their owners and hence face fewer incentives to raise such surpluses by lowering the quality of their service. In contrast, for-profits, by their very nature, may be inclined to raise profits by lowering the quality of their service.

This risk of opportunistic behavior by for-profits provided the justification for the

traditional solution in Japan to allow only nonprofit enterprises to operate in the market. However, in the face of a rapidly aging population, the Japanese government was forced to change the entry policy in order to overcome the bottleneck in the supply of care for the elderly. Almost five years have passed since the introduction of the new entry policy, and wide-ranging reform of the public insurance scheme for the elderly is to be implemented in the spring of 2006. In spite of this innovative institutional change, there has been little research on the determinants of Japanese consumers choices regarding nonprofit and for-profit at-home care providers.

The Japanese at-home long-term care market is unusually suitable for testing the "contract failure" hypothesis because government regulation stipulates that output prices must be the same for all types of providers. Service contents are also heavily regulated and standardized across providers. Service contents are also heavily regulated and standardized across providers, meaning that consumers' choice should reflect preferences regarding nonprofit and for-profit providers free of distortions that price or product differentiation would introduce. At the same time, this of course prevents us from considering the effect of pricing behavior of different types of providers and any effect this would have on consumer choice.

This study takes advantage of a unique micro-level data set to test consumer preferences with regard to the different types of providers. First, we address whether the quality of services provided by nonprofit organizations is better than that of profit-seeking organizations. Several earlier studies, such as Shimizutani and Suzuki (2002) and Suzuki (2002), have examined quality differences between service providers based on suppliers' data. However, to our best knowledge, there has been little research examining the hypothesis based on demand-side data. Second, we examine the determinants of households' choice between different types of service providers. To explore these issues, micro-data from

recipients is utilized to examine the hypothesis because information asymmetry biases care users' preferences toward nonprofits, regardless of the quality of service. Concretely, we examine households' choice of provider along with an array of variables influencing the selection of type of at-home care provider.

The paper proceeds as follows. Section 2 provides an overview of previous studies, most of which have been conducted in the United States. Section 3 describes the data set used in this study. Section 4 presents the specification of the model used for the empirical analysis and discusses the estimation results. Section 5 draws policy conclusions from our empirical findings.

2. Review of Previous Studies

In contrast with the situation in Japan, there are plenty of studies in Western countries that analyze consumer behavior with regard to nonprofit and for-profit organizations. The starting point of any discussion of this topic is usually the "contract failure" approach proposed by Hansmann (1980), on which most subsequent studies are based.

Hansmann's discussion begins with two key concepts: asymmetry of information and non-distributional constraints. As highlighted by Akerlof (1970), quality uncertainty is inevitably due to the asymmetry of information between sellers and buyers. Under this asymmetry, consumers are not able to observe the quality of products in advance. This is especially crucial in the service sector.

If this is the case, which type of provider do consumers choose to purchase services from? Suppose there are two types of providers: for-profits and nonprofits. By definition, the nonprofit sector is prohibited from paying out profits to its owners. Hence, retained profits are utilized to provide higher wages for staff, contributing to a higher quality of service. In

contrast, for-profits need to make a profit, which is distributed to stockholders, inviting

opportunistic behavior to decrease costs by lowering the quality of services. This mechanism

motivates consumers to choose to purchase services from nonprofits rather than from

for-profits. Consumers choose nonprofit services because they believe that nonprofit suppliers

provide higher quality services, though this perception may not necessarily be related to the

actual quality of service delivered by either type of provider.[2]

Apart from the contract failure hypothesis, another explanation as to why consumers

might prefer nonprofits over for-profits is that the different types of providers behave

differently. While managers of for-profits are assumed to maximize profits only, managers of

nonprofits may derive greater utility from improving the quality of services as well as

increasing profits. Newhouse (1970) argues that managers in the not-for-profit sector have

fewer incentives to lower the quality of services provided, since their performance is judged

by quality, or they desire to show professional excellence or technical virtuosity by stressing

quality.

While some studies proceed by modeling the contract failure hypothesis (Easley and

O'Hara (1983, 1988), Chillemi and Gui (1991), Hirth (1999)), there are relatively few

empirical studies that directly examine consumer choice with regard to different types of

providers. One exception is the study by Holtmann and Ullmann (1993), and in what follows

we use their relatively simple framework to analyze the choice problem faced by consumers.

We assume that a consumer purchases services from nonprofits (Q_n) and for-profits (Q_p).

Since the consumer cannot judge the quality of services in advance, the quality is uncertain.

However, for simplicity, we assume that the quality of nonprofit services is certain, but this is

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[2] Noguchi and Shimizutani (2002) confirm that there is a nonprofit wage premium in the Japanese elderly care market. Although this is interpreted to imply higher quality, the belief that higher costs imply higher quality is not always well founded. Reduced incentives for nonprofits to enforce contracts and develop internal controls may result in economically inefficient organization. In this case, higher costs do not necessarily mean better quality (Jensen and Meckling (1976)). Shimizutani and Suzuki (2002) show that, indeed, the quality of services offered by nonprofits is not always higher than that offered by for-profits.

not the case with for-profits. Thus, we define the actual unit of for-profit services as $Q^*_p = zQ_p$ where z is a random variable with $E(z)=1$.

A consumer maximizes his utility $EU(Q_n, Q^*_p)$ under the budget constraints $p_nQ_n+p_pQ_p=Y$ and $Q_n\geq 0$ and $Q_p\geq 0$. The utility function is assumed to be increasing and concave in Q_n, Q_p, z.

We set up the Lagrangian as follows, with λ as the Lagrange multiplier:

$$L= EU(Q_n, Q^*_p)+ \lambda (Y-p_nQ_n-p_pQ_p) ; Q_n\geq 0 \text{ and } Q_p\geq 0. \qquad (1)$$

The first order conditions are:

$$\partial L/\partial Q_n=E(\partial U/\partial Q_n)- \lambda p_n\leq 0$$

$$(\partial L/\partial Q_n) Q_n=0$$

$$\partial L/\partial Q_p=E[(\partial U/\partial Q^*_p)z]- \lambda p_p\leq 0$$

$$(\partial L/\partial Q_p) Q_p=0$$

$$\partial L/\partial \lambda = Y-p_nQ_n-p_pQ_p =0$$

Therefore,

If $Q_p=0$ and $Q_n>0$, $E(\partial U/\partial Q_n)/ p_n> E[(\partial U/\partial Q^*_p)z]/ p_p$

If $Q_p>0$ and $Q_n>0$, $E(\partial U/\partial Q_n)/ p_n= E[(\partial U/\partial Q^*_p)z]/ p_p$

If $Q_p>0$ and $Q_n=0$, $E(\partial U/\partial Q_n)/ p_n< E[(\partial U/\partial Q^*_p)z]/ p_p$

Given that government regulation stipulates uniform prices in the Japanese long-term care market ($p_p= p_n$), the choice between nonprofit and for-profit providers depends on the expected utility derived from using nonprofit providers, $E(\partial U/\partial Q_n)$, and for-profit providers, $E[(\partial U/\partial Q^*_p)z]$. We should note that $E[(\partial U/\partial Q^*_p) z]= z E[\partial U/\partial Q_p]+cov(z,\partial U/\partial Q_p)$, where, by the concavity assumption, the second term on the right-hand side is negative.

Holtmann and Ullmann (1993) suggest that this second term can be viewed as the marginal risk premium associated with for-profit care. In this case, uncertainty regarding the quality of services provided by the for-profit sector diminishes the expected utility and thus

motivates consumers to choose nonprofit services. In other words, even if the average quality of for-profits and nonprofits is the same, the left-hand side is always greater than the right if the amount purchased is the same.[3]

Thus, we must address two issues. The first is to determine which type of provider offers a higher quality of services in practice. Earlier studies on this topic for the case of Japan have been inconclusive (see Shimizutani and Suzuki (2002) for a survey). We can then turn to the second issue: which type of provider is preferred by consumers. We examine these questions in the next section by taking advantage of our micro-level data set.

3. Description of the Data

The data set used in this study is based on the micro-level data from the "Survey on Long-term Care Users." This survey was performed three times, in 2001, 2002 and 2003. The first survey was conducted from November to December 2001 by the Price Policy Division of the Cabinet Office. The households surveyed were chosen on the basis of a survey carried out by a private research company that randomly selects participants based on Japan's household registration system. The distribution of the "Survey on Long-term Care Users" resembles that of the Population Census.

In the Survey, a "care receiver" is defined as an elderly person receiving care in order to cope with daily life activities. The survey only includes those living at home with family members, i.e. those living in institutions are excluded. Moreover, the survey includes both those elderly whose care is paid for by the public insurance scheme (for which approval by the local government is required) and those paying for at-home care out of their own pockets.

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[3] As indicated, in order to keep the "contract failure" model simple, we assume that the quality of services provided by for-profits is uncertain while that of nonprofits is certain. However, as the anonymous referees pointed out, contract failure of course is also possible in the case of nonprofits. Therefore, there remains the question of how effective nonprofit governing boards are in looking after the interests of service receivers and the public. However, addressing this topic is beyond the scope of this short paper.

From all the observations of the "Survey of Long-term Care Users", we randomly selected households with care receivers and, among those, chose 1,300 households with only one receiver[4]. The research company mailed our questionnaires to these households and received responses from 1,005 households (for a response rate of 77.1 percent).

The second "Survey on Long-term Care Users" was conducted by the same private research firm in October and November 2002, but this time under the aegis of the Economic and Social Research Institute. The notable merit of this survey is that it performed a similar survey on the same households as in the 2001 survey. Of the 1,005 households in the first survey, we obtained responses from 822. In 617 of these households, the elderly care receiver still lived at home with family members and received at-home care.[5] In addition, we selected new households with one care receiver and added 457 households to the sample. Thus, the sample size for 2002 is 1,074 households.

The third survey was also implemented by the Economic and Social Research Institute, in December 2003. The data were obtained following the same methodology as in 2002. Of the households surveyed both in 2001 and 2002, we mailed the questionnaire to 544 and obtained responses from 381. Of those first surveyed in 2002, we sent the questionnaire to 432 households and received replies from 251. In addition, we mailed the survey to 423 households which were newly chosen in 2003 and had responses from 349.   Thus, the sample size for 2003 is 981 households.

The respondents to the survey were the main caregivers in the household. The questionnaire covers a variety of items to establish patterns of care use over a period of

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[4] The screening results show that households with one care receiver account for 71.1 percent of the total, those with two care receivers account for 26.9 percent, and the remainder are households with more than two care receivers. Our survey sample is limited to those households with one care receiver since a household with two or more care receivers is very different from those with one care receiver in that the care burden is more onerous and care is possibly provided by two or more caregivers, which makes it hard to identify who cares for whom.
[5] Of the 205 elderly care receivers who no longer lived at home with family members, 75 entered an unspecified type of institution, 68 died, and 29 were hospitalized.

several years, the health condition of caregivers and receivers, and household demographics.

Table 1 provides summary statistics of our dataset. We pool the 2001, 2002 and 2003 survey in order to obtain a large sample size of 479 observations. Note that the survey asks respondents to indicate the type of provider they rely on for at-home care services. This is the segment on which most for-profits concentrate. The number of households in our sample that use for-profit at-home care services is 151 (31.5 percent), while 328 (68.5%) use nonprofit providers, implying that nonprofits have still a larger marker share even after the deregulation.

Comparing household characteristics, we find that, users of for-profits have, on average, a higher annual income and greater total assets. Moreover, care levels are typically higher for users of nonprofit providers. We should note that the share of those who have changed providers is much higher among users of for-profits than among of nonprofits. One possible explanation of changes of provider is that households become familiar with a provider, are dissatisfied, and want to try another provider. But it should be noted that in the survey, the dominant case of provider change is from nonprofit to for-profit operators, suggesting that households with more knowledge about the quality of care tend to switch from nonprofit to for-profit providers. Finally, as was to be expected given that the market for at-home care was deregulated only in 2000, the share of those who began using their provider before that year is much higher among users of nonprofits than for-profits.

Although the survey does not contain any information from suppliers on the quality of services, we do have results on care users' subjective evaluation of the care they receive. These results help us to address the first issue referred to in the previous section, namely: which type of provider offers higher quality services?   We asked respondents to rate the service of their provider ("Excellent", "Above average", "Below average", "Very bad", and "Don't know") and divided the results by type of provider. The results are shown in Figure 1 and yield some interesting conclusions. Generally, the dominant answer is "above average,"

and this share is higher for nonprofits. In 2001 and 2002, the quality of for-profit providers was perceived to be marginally worse than that of nonprofit providers, though uncertainty was certainly much higher regarding the quality of for-profit providers.. But we observe a drastic change in 2003. The share of users considering the service of their provider to be "excellent" for the first time was higher for for-profits than for nonprofits, while at the same time, more users of nonprofits judged the service of their provider to be "below" average than user of for-profits. Thus, users' perception of the quality of care provided by for-profits has clearly improved, while the reverse seems to be the case for nonprofits.

Figure 2 shows the reasons that motivated users' choice of a nonprofit or for-profit provider." The dominant determinant is the recommendation made by the care manager responsible for devising an individual's care plan once eligibility for insurance-funded care has been determined. A recommendation by an acquaintance played a more important role in the choice of for-profits than of nonprofits; public reputation also played a more important role in the choice of a for-profit provider than a nonprofit provider in 2001 and 2002, though this had reversed by 2003. The share of those who began using their provider before 2000 has decreased. The share of those who chose nonprofits due to anxiety over using for-profit providers is very small, suggesting that there is little apprehension that for-profit providers engage in opportunistic behavior. These results indicate that users do not perceive the quality of service delivered by either type of provider to be evidently better.

In sum, according to respondents' perception, the quality of care services provided by for-profits is not necessarily worse, and the perception of these providers in fact has become more favorable. There seems to be little prejudice against profit-seeking behavior that might cause users to hesitate in using the services offered by for-profit providers. This brings us to the second issue, to be addressed in the next section: which type of provider is preferred by consumers.

4. **Estimation and Results**

Based on the discussion in Section 2, we employ the following specification to consider the choice users make:

$$Z_i^* = X_i \gamma + u_i$$

$$Z_i = 1 \quad if \quad Z_i^* \geq 0 \quad or \quad -u_i \leq X_i \gamma$$

$$Z_i = 0 \quad if \quad Z_i^* < 0 \quad or \quad -u_i > X_i \gamma$$

where Z_i^* is the likelihood of a household to choose for-profit providers, which is unobservable. However, we can observe Z_i, which is a dichotomous variable that takes 1 if a user actually chooses a for-profit facility. X_i refers to users' characteristics that might affect choice of provider and includes gender, age, care level, annual income, assets, the relationship between care giver and receiver, and a dummy variable for using the same provider since before 2000.[6] γ is the tendency of a household to choose for-profits. X_i also contains several variables to proxy the asymmetry of information. It includes the number of family members, since more members can provide more informal care and monitor outside caregivers more intensively. It also includes whether a member of the immediate family or a relative is a doctor or professional caregiver, since it can be assumed that such households have more information on the quality of care. And, naturally, any households that have changed providers are also expected to have more information on providers. u_i is an error term following $N(0, \sigma_u^2)$.

Table 2 shows the estimation results. The first column reports the results for the random-effects probit model. The coefficients on household income and assets are positive

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[6] In the survey, respondents were provided with a choice of annual income and asset brackets which they were asked to tick. We exclude any households falling into lowest categories (less than 2 million yen annual income and 3 million yen worth of assets) and the highest (more than 20 million yen annual income and 15 million yen worth of assets).

but not statistically significant. Households where the elderly patient requires a lower care level are more inclined to choose for-profit providers. Regarding family size, larger households tend choose nonprofits rather than for-profits. Households with an acquaintance who is a medical doctor or a professional caregiver tend to choose nonprofits. Households that have changed providers are more inclined to choose for-profits. Moreover, households that began using their provider before 2000 tend to be with nonprofits. The estimation using the fixed-effects probit model confirms these results.

The significant coefficient on the dummy for changing providers indicates that households with better knowledge of suppliers tend to choose for-profits, which is consistent with our discussion above. "On the other hand, the significant negative coefficient on the dummy indicating whether any acquaintance is a medical doctor or professional caregiver may be explained by the fact such individuals typically work in the provision of medical or institutional care, a field in which at present only nonprofit organizations are allowed to operate, and it can be assumed that they are more likely to recommend the same type of provider. This result is also consistent with the fact that households with elderly patients requiring higher care-levels are inclined to choose nonprofits, since nonprofit providers usually offer both institutional care and at-home care and users may be reassured to know institutional care services are available should they become necessary as a result of an accident or emergency. Finally, we found that nonprofits enjoyed an "advantage" over for-profits by virtue of having a longer history of operating in the market.

In sum, the Japanese long-term care market does not seem to conform to the situation predicted by the contract failure hypothesis. Rather, two other factors seem to bias user choice towards nonprofits: First, the fact that they have operated in the market since before deregulation in 2000; and second, the fact that they are also able to offer medical and/or institutional care services, which for profit operators at present are still banned from doing.

5. **Conclusion**

This study takes advantage of original survey data to examine whether households'
choice of at-home care service providers is biased toward nonprofit operators, as the contract
failure hypothesis predicts. Our empirical findings can be summarized as follows. In our
survey, for-profit providers account for about 40 percent of at-home care, suggesting that
for-profit operators have met with acceptance following deregulation of market entry along
with the introduction of the public long-term care insurance scheme. In this sense, for-profits
have been well received by those who need them following deregulation and the introduction
of the public long-term care insurance. As regards preferences with respect to nonprofit and
for-profit providers, households with an elderly patient requiring higher care levels or with an
acquaintance who is a medical doctor or professional caregiver are more inclined to choose
nonprofits. Both results are associated with the fact that, as incumbents, only nonprofits offer
medical or institutional care. In addition, nonprofits enjoy an advantage by virtue of being
longer in the market. In this sense, proprietary providers are disadvantaged. On the other hand,
households with better knowledge of providers tend to choose for-profits, which suggests that
reducing information asymmetry of may help to create a more level playing field.

Before the introduction of the long-term care insurance scheme in 2000, the private
provision of health care services was generally viewed with suspicion, based on the fear that
profit-orientation would lead to opportunistic behavior. However, the growth and success of
the for-profit sector have allayed such fear and this might be an opportune moment to reassess
the role and status of the nonprofit sector since equal market access has now be achieved and
for-profits can compete on an equal footing with nonprofits. Traditionally, nonprofits use
operating surpluses to cover deficits, grow or reduce bottlenecks, provide community services

such as charitable care, research, education. (Schlesinger et al.(1996)). With prices and contents of services for at-home care regulated by the government, the role of charitable organizations in this industry should be reconsidered.

In this context, one important issue that would need to be scrutinized is the tax status of nonprofit organizations. Like in the U.S., as entities serving the public interest, nonprofits in Japan enjoy tax exemptions. However, recent research from the U.S. suggests that in order to justify this special treatment, the social benefit provided by nonprofits should be at least equal to the benefits provided by profit-seeking firm (community benefits and taxes paid) plus the profit these firms generate for their owners (Claxton et al. 1997; Nicholson et al. 2000).

Future research should examine these issues in Japan in order to allow an assessment of the optimal division of labor between different types of providers and the tax treatment of nonprofit operators in order achieve this. Such research could also help to inform policies regarding other markets where nonprofits are still dominant.

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bunseki --- micro data ni yoru jittai kaimei to seisaku teigen [An Economic Analysis of Care for Children and the Elderly in Japan: A Micro-level Investigation and Consideration of Policy Implications] (in Japanese), Toko-Keizai Shimpo Sha, Tokyo. June 2004.

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Figure 1 Subjective Evaluation of the Quality of Services

2003 Survey

(%)

2002 Survey

(%)

2001 Survey

(%)
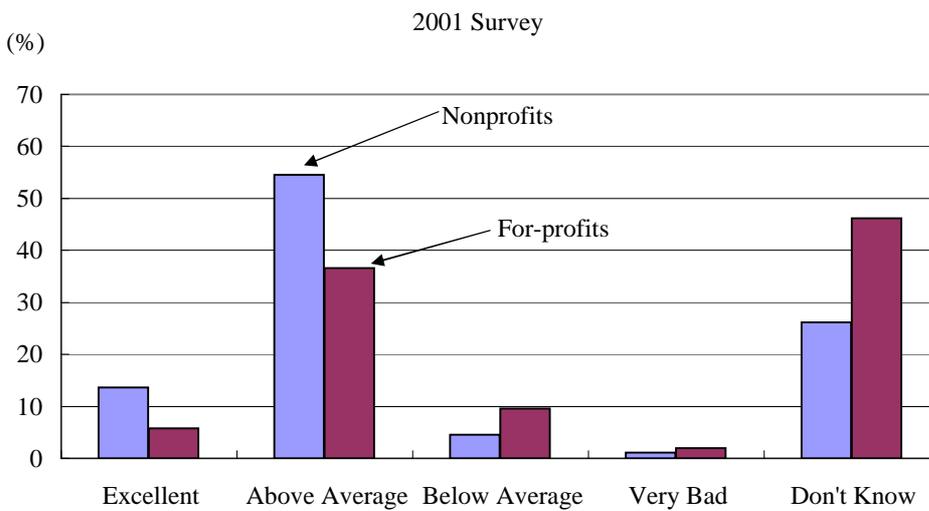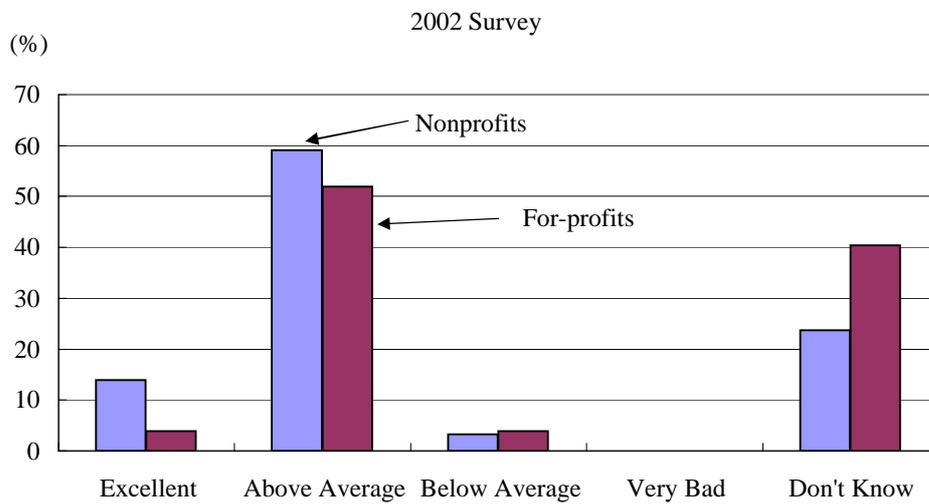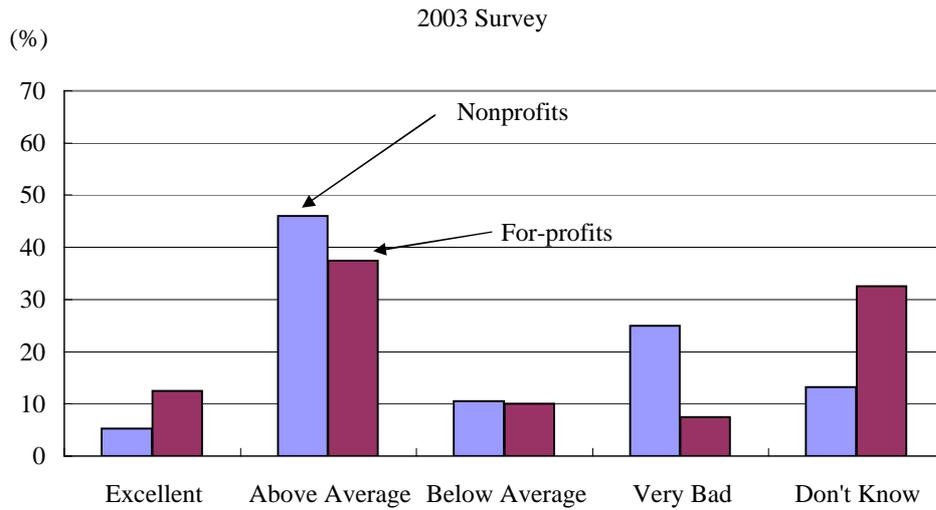
Figure 2 Reasons to Choose the Provider

2003 Survey

2002 Survey

2001 Survey
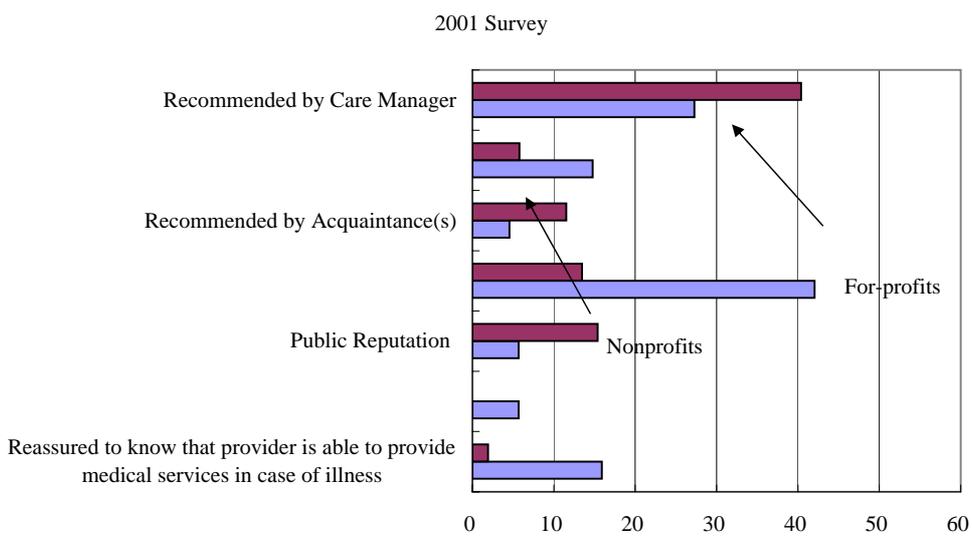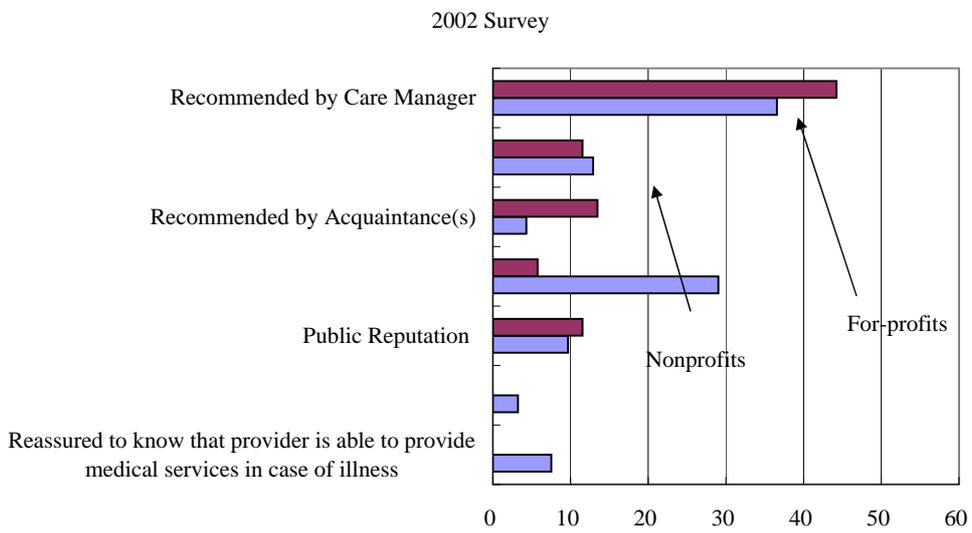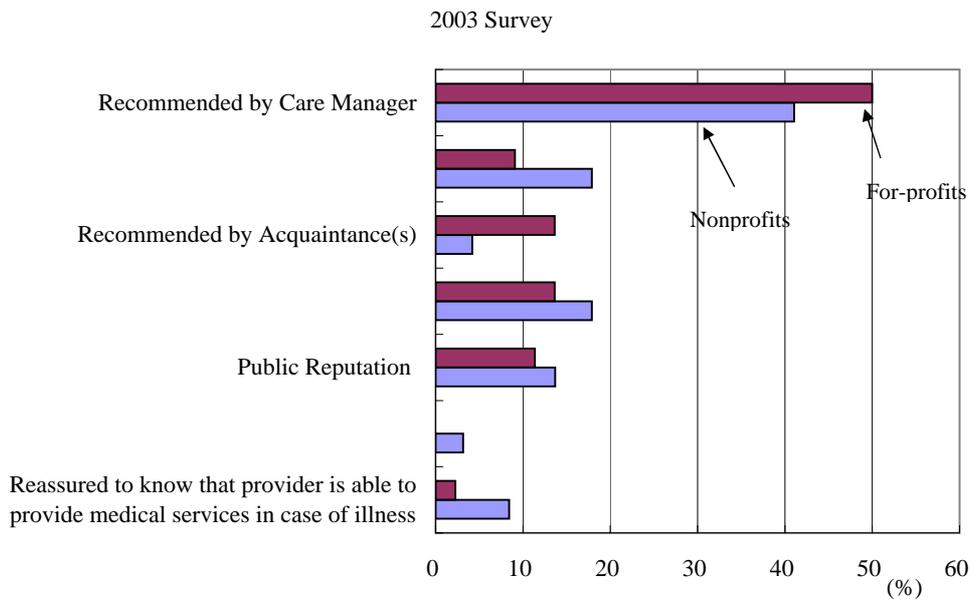
Table 1 Descriptive Statistics

	Total			Nonprofit Users			For-profit Users		
	No. of Obs.	Mean	Std. Dev.	No. of Obs.	Mean	Std. Dev.	No. of Obs.	Mean	Std. Dev.
Dummy for For-profits	479	0.315	0.465	328	0	0	151	1	0
Annual Household Income (ten thousand yen)	446	733.408	418.135	307	711.889	408.425	139	780.935	436.571
Annual Household Income (natural logarithm)	446	6.432	0.592	307	6.401	0.594	139	6.501	0.582
Total Household Assets (ten thousand yen)	422	4,618.246	4,201.091	289	4,247.924	3,922.566	133	5,422.932	4,665.498
Total Household Assets (natural logarithm)	422	7.950	1.097	289	7.880	1.070	133	8.104	1.144
Care Level (support)	479	0.052	0.223	328	0.043	0.202	151	0.073	0.261
Care Level 1	479	0.207	0.405	328	0.186	0.390	151	0.252	0.435
Care Level 2	479	0.196	0.398	328	0.189	0.392	151	0.212	0.410
Care Level 3	479	0.154	0.362	328	0.143	0.351	151	0.179	0.384
Care Level 4	479	0.146	0.354	328	0.171	0.377	151	0.093	0.291
Care Level 5	479	0.165	0.372	328	0.186	0.390	151	0.119	0.325
Relationship (spouse=1)	479	0.102	0.303	328	0.122	0.328	151	0.060	0.238
Relationship (own parent=1)	479	0.428	0.495	328	0.412	0.493	151	0.464	0.500
Relationship (spouse's parent=1)	479	0.428	0.495	328	0.427	0.495	151	0.430	0.497
Care Receiver's Sex (female=1)	469	0.738	0.440	323	0.728	0.446	146	0.760	0.428
Care Receiver's Age	470	84.038	7.226	324	83.701	7.252	146	84.788	7.136
Number of Family Members	472	3.964	1.447	324	4.019	1.421	148	3.845	1.502
Acquaintances (Doctor or Professional Caregiver)	479	0.336	0.473	328	0.369	0.483	151	0.265	0.443
Dummy for Changing Providers	479	0.123	0.329	328	0.088	0.284	151	0.199	0.400
Dummy for Use Before 2000	475	0.221	0.415	328	0.271	0.445	147	0.109	0.313

Notes: The care levels of individual care receivers are determined by local governments and classified into six categories (support needed and 1-5) .
"Relationship" refers to relationship of the care receiver to the caregiver. "Dummy for Changing Providers" takes 1 for those households that
have changed their providers. "Dummy for Use Before 2000" takes 1 for those households that began using the current provider before 2000.

Table 2 Estimation Results

Dependent Variable : For-profits=1 and nonprofits=0	Random Effects Model			Fixed Effects Model			
	Coefficient	Std. Dev.		Coefficient	Std. Dev.		Marginal Effect
Annual Household Income (natural logarithm)	0.233	0.153		0.234	0.153		0.077
Total Household Assets (natural logarithm)	0.037	0.074		0.037	0.074		0.012
Care Level (support)	0.860	0.435	*	0.843	0.437	*	0.317
Care Level 1	0.747	0.338	*	0.733	0.339	*	0.264
Care Level 2	0.457	0.336		0.446	0.337		0.157
Care Level 3	0.499	0.343		0.490	0.343		0.175
Care Level 4	-0.026	0.368		-0.032	0.368		-0.011
Care Level 5	-0.011	0.349		-0.027	0.351		-0.009
Relationship (spouse=1)	4.854	1.373	***	4.888	1.378	***	0.869
Relationship (own parent=1)	5.500	1.478	***	5.535	1.483	***	0.991
Relationship (spouse's parent=1)	5.547	1.497	***	5.586	1.501	***	0.994
Care Receiver's Sex (female=1)	-0.133	0.187		-0.133	0.187		-0.044
Care Receiver's Age	0.015	0.011		0.016	0.011		0.005
Number of Family Members	-0.099	0.058	*	-0.100	0.058	*	-0.033
Acquaintances (Doctor or Professional Caregiver)	-0.418	0.154	***	-0.415	0.154	***	-0.130
Dummy for Changing Providers	0.558	0.203	***	0.565	0.203	***	0.205
Dummy for Use Before 2000	-0.612	0.195	***	-0.605	0.196	***	-0.174
Constant	-8.779	0.000		-8.849	0.000		
Hausman test statistics	-55.63			-55.88			
Number of Observations.	401			401			
Log Likelihood	-217.10721			-217.006			
Pseudo R squared				0.133			

Note: ***, **, and * indicate statistical significance at the 1%, 5%, and 10%-level, respectively.