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IFN Working Paper No. 1213, 2018

## **Choice and Competition in the Welfare State: Home Care as the Ideal Quasi-market**

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Lundberg

# Choice and competition in the welfare state

## Home care as the ideal quasi-market<sup>\*</sup>

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We study a reform by which a standardized model of choice and competition was introduced in tax-financed home care in a majority of Swedish municipalities. The market for home care is of particular interest since it is close to the ideal quasi-market. For identification, we exploit the different timing of reform implementation across municipalities. We find that the introduction of free choice and free entry in home care increased perceived quality by about one quarter of a standard deviation without affecting costs. Since satisfaction is unrelated to the private market share, the underlying mechanism seems to be new choice opportunities rather than competition or an advantage of private providers.

**Keywords:** Choice, competition, privatization, elderly care, new public management

**JEL Codes:** H42, H75, I11, L33

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# 1. Introduction

Welfare budgets, whether public or private, are under strain. Traditional governance models, which gave the professions autonomy to manage themselves within generous budgets, are challenged. Management principles that aim to increase accountability and efficiency, while reining in costs, have replaced old practices. Some of the new models emphasize target setting and control, others competition and choice and yet others empowerment of the beneficiaries of services and other concerned groups.

One way to combine competition and choice with government funding and control is to provide public services in quasi-markets (Le Grand 1991), in which users express demand for a service that is delivered by private and public providers and paid for by the government, typically at a regulated price. Often an explicit or implicit voucher system remunerates the provider.

Proponents of competition and choice have made a straightforward case for this model: competition reduces cost and choice is valuable to consumers (Le Grand 2007). However, it has been observed that only a minority of patients make an active choice of health provider (Schwartz et al. 2005). This absence of choice – which could be due to information problems and switching costs – might imply that the benefits of choice and competition fail to materialize. At a general psychological level, Schwartz (2004) has argued for a “paradox of choice” such that the freedom to choose among too many alternatives results in dissatisfaction. Verme (2009) provides a more encouraging perspective by linking perceived freedom of choice and control to higher life satisfaction.<sup>1</sup>

While several countries have introduced competition in the public sector in recent decades, Sweden stands out as the country that has most fully embraced the quasi-market model of choice and competition. Since around 1990, Sweden has experienced a gradual privatization of the production of public services, with expanded choice opportunities among the beneficiaries being an important aim of the reforms. Sweden combines tax-financed public services with freedom of choice, freedom of entry for providers that meet moderate standards and a high market penetration of private providers, most of which are for profit companies. At the same time, rules that prevent individuals from topping up the publicly financed services aim to provide comparable standards for everyone and creates clear boundaries between the publicly provided welfare services and the marginal privately financed alternatives.<sup>2</sup>

For several welfare services, such as compulsory schooling, kindergartens and elderly care, the combined national market share of private providers exceeds 20 percent and for some services,

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<sup>1</sup> As for the general relationship between freedom of choice and locus of control, Nikolaev and Bennett (2016) and Pitlik and Rode (2016) have demonstrated that people living in countries with higher levels of economic freedom perceive a greater control over their lives.

<sup>2</sup> Exceptions are dental care for adults and occupational health care. In home care, there is a tiny privately financed market, encouraged by a tax deduction on household services. Among people 65 years and older who use the services, the number of hours of tax-financed home care is about 18 times larger than the number of hours purchased out of pocket by households that use the tax deduction (Erlandsson *et al.* 2013, p. 50).

such as primary care, it exceeds 30 percent. The private market share of tax-financed home care was 24 percent in 2015.<sup>3</sup>

In this paper, we study a particularly interesting part of the Swedish public sector – home care for the elderly. The market for home care is close to the ideal quasi-market, and suitable for a voucher model according to Blank's (2000) categorization of services. The firms' entry costs and the consumers' switching costs are low, the informational problems are rather limited for those who receive the services, while the government bears close to the total costs, and the external benefits, as we argue below, are close to non-existent. There are two advantages of studying such a frictionless quasi-market. First, we can use perceived quality as our key performance measure since the quality of home care perceived by the user will closely resemble a reasonable social measure of quality. Second, we get an indication of what the quasi-market model is able to deliver on a market where the typical problems of the model are largely absent. While the findings do not automatically generalize to other quasi-markets for more complicated services, they are still informative about such markets by providing information about a simple and transparent case.

We study a reform that standardized and simplified the introduction of local quasi-markets for social services, including elderly care. The reform, legally effective in 2009, was national but its local implementation has occurred successively in 164 out of 290 municipalities, as the decision whether or not to implement the reform lies with each municipality. We use the different timing of implementation to identify the reform effect on user satisfaction at the municipal level.

Similar reforms of home care were introduced in Denmark in 2001 (Szehebely 2005, p. 115) and in England in 2007 (Brennan 2012). There have also been similar choice reforms in health care. In Swedish primary care, the reform under study meant that the county councils had to implement choice systems immediately (Glenngård and Anell 2017). Glenngård (2016) concludes that the reform improved the accessibility of primary care, but also highlights that patients assess care quality mostly based on their own contacts with providers rather than by using more objective information. The 2006 English National Health Service reform allowed patients and their physicians to choose between hospitals when hospital treatment was needed. Cooper et al. (2011) and Gaynor, Propper and Seiler (2012) find that the UK reform improved quality and, according to Gaynor, Moreno-Serra and Propper (2013), it did so without increasing costs.

The related previous Swedish studies have focused on nursing homes. Bergman et al. (2016) find that mortality among the elderly decreased slightly in Swedish municipalities after they started procuring the operation of nursing homes from private companies. Our study differs in that we study a national reform of home care that standardized and expanded market entry and user choice. Using quality measures from the Swedish National Board of Health and Welfare (NBHW), Stolt et al. (2011) and Winblad et al. (2017) find that public nursing homes have an

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<sup>3</sup> Data from Statistics Sweden and the Swedish National Board of Health and Welfare.

advantage on structural quality indicators whereas private homes perform better on processual quality indicators. The latter study also compared different ownership types and found no quality differences between for-profit and non-profit nursing homes.<sup>4</sup>

We use data from an annual NBWH survey of user satisfaction that covers more than half of the elderly who receive home care (with around 100 000 responses annually). We find that the introduction of free choice and free entry in home care increased perceived quality by about one quarter of a standard deviation – corresponding to lifting the median municipality to slightly above the 60th percentile. We also find that the introduction of free choice increases the share of private provision, but that the share of private provision as such is unrelated to user satisfaction.

## **2. The Free-Choice Reform and Market Characteristics**

Elderly care is provided at highly subsidized rates by local municipalities to a quarter of a million senior Swedish citizens, corresponding to about 13 percent of the population aged 65 and older, at a cost amounting to about one fifth of municipal revenues or about 3 percent of GDP. Sweden and the Netherlands stand out among OECD countries with by far the highest public long-term care expenditure as a share of GDP (OECD/European Commission 2013, p. 42). The old Swedes most in need have the right to a room in a tax-financed nursing home. Old people who are better able to manage their own lives, while still in need of assistance, receive home care, i.e. help in their home. In addition to medical assistance with drugs and wounds etc., home care includes assistance with eating, dressing, and bathing. The decision to grant tax-financed home care is made by the municipality, even in the case when the provider is private. There is also informal home care, provided by family and friends. In this paper, we focus on formal tax-financed home care.

A consistent trend, at least since around 1990, has been that more old people receive help in their own home, whereas fewer live in nursing homes. Total costs, as a percentage of GDP, have been stable throughout this period, despite an ageing population. Largely this is due to the elderly being in better health, but part of the explanation lies in the trend towards home care and, possibly, in the increased level of competition.

A court ruling in 1988 made clear that Swedish municipalities have the right to procure elderly care, including home care (Jordahl and Öhrvall 2013). While about a third of all municipalities had opted to procure the management of at least some nursing homes, only about 30, or a tenth of all municipalities, had procured home care before the Free-Choice Act was introduced. Some of these municipalities allowed eligible citizens to choose between the contracted providers and

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<sup>4</sup> In education, the similar school voucher reform of 1992 introduced both school choice and liberal entry requirements for new independent schools. Böhlmark and Lindahl (2015) focus on the market share of independent schools and find that the reform improved short- and long-term educational outcomes without increasing costs. Edmark et al. (2014) focus on choice opportunities and find that the effects of school choice on student outcomes have been positive, small and evenly distributed.

the municipality's own production unit (in-house), while other municipalities allocated districts to providers without allowing customer choice.

The Free-Choice Act of 2009 confirmed that municipalities have the right to establish free choice systems and prescribed that such systems should meet certain standards for information, market entry and choice. Each municipality is free to decide whether or not to implement the Free-Choice Act. While the procurement procedures used in the 1990s and the early 2000s had allowed one or a few firms to enter, the Free-Choice Act introduced the principle that all firms that met the defined quality standards were allowed to enter. This reduced entry barriers and triggered intense competition. As expected, new firms tried to gain competitive advantages via product differentiation, including language and cultural skills, as well as through strategic naming of the company in order to be at the top of the list of available providers to choose from. In the largest municipality, Stockholm, around 160 home care providers offered their services in 2017, while the smallest municipalities typically had only one or two private providers, if entry was allowed.<sup>5</sup>

Figure 1 describes the implementation of the Free-Choice Act. The number of municipalities that implemented the act increased annually from 2009 to 2011. Thereafter the annual number has decreased and the share of municipalities that has implemented the act appears to have stabilized around 55 percent.

Within each municipality the per-hour payment is, in principle, equal for all providers, including the municipality's own production unit.<sup>6</sup> Importantly, the exercise of government authority (the decision that a person is entitled to help) is separated from the production of the services and remains with the municipality. The introduction of a user-choice system implies that the entitlement decisions, taken by municipal case (or "needs assessment") officers, determines the cost of elderly care. Before the reform, the municipal budget for home care was set in a political decision, to which the production unit had to adjust. After the reform, the municipality's cost follows from the entitlement decisions and the per-hour fee. That is, the reform turned a discretionary budget item into mandatory spending.

In the 1980s, almost all elderly care services were produced in-house by the municipalities, but since around 1990 both home care and care in nursing homes have, to an increasing extent, been privately provided. Figure 2 displays the privatization of home care. By 2015, the privately produced fraction of home care had increased to 18 percent of the users and 24 percent of the delivered hours.

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<sup>5</sup> In the broadest meaning of the term, the Free-Choice Act can be seen as introducing so called Public Private Partnerships, although this term is often reserved for infrastructure partnerships that are more long-term and cooperative (cf. Li and Akintoye 2003).

<sup>6</sup> Hourly compensation may vary slightly to offset the effect of different VAT rules for public and private providers. Also, the rates may factor in cost drivers, such as the need for two simultaneous assistants making the home visit, and the municipality may be the exclusive provider of night-time services and services in remote areas.

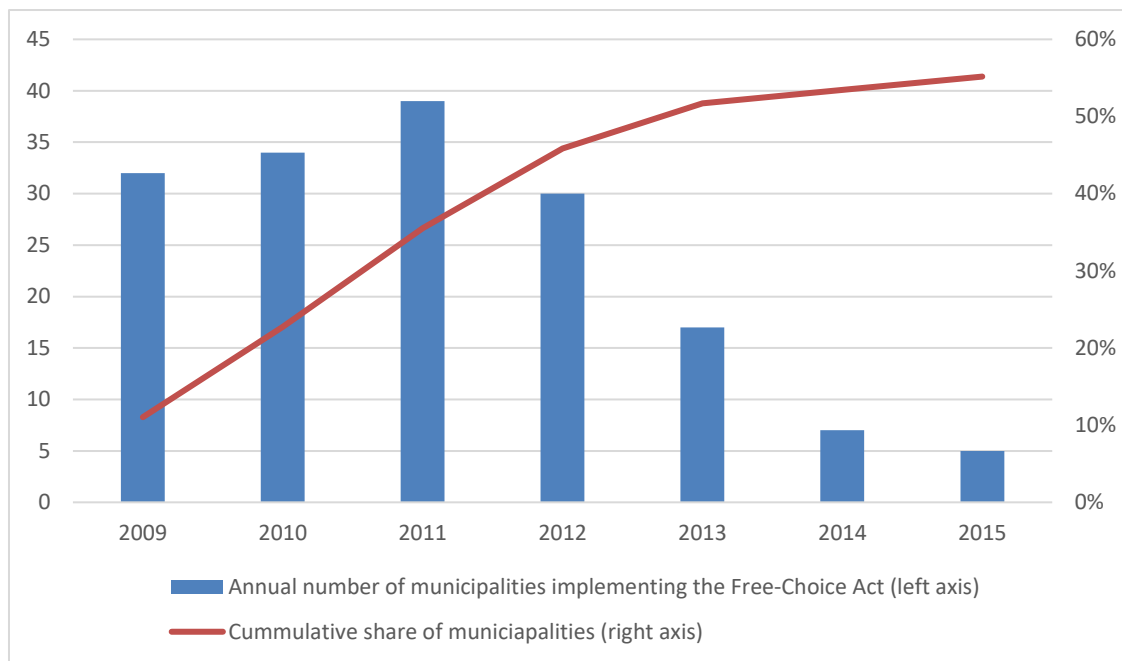


Figure 1. Implementation of the Free-Choice Act in Swedish municipalities. Source: The Swedish Association of Local Authorities and Regions

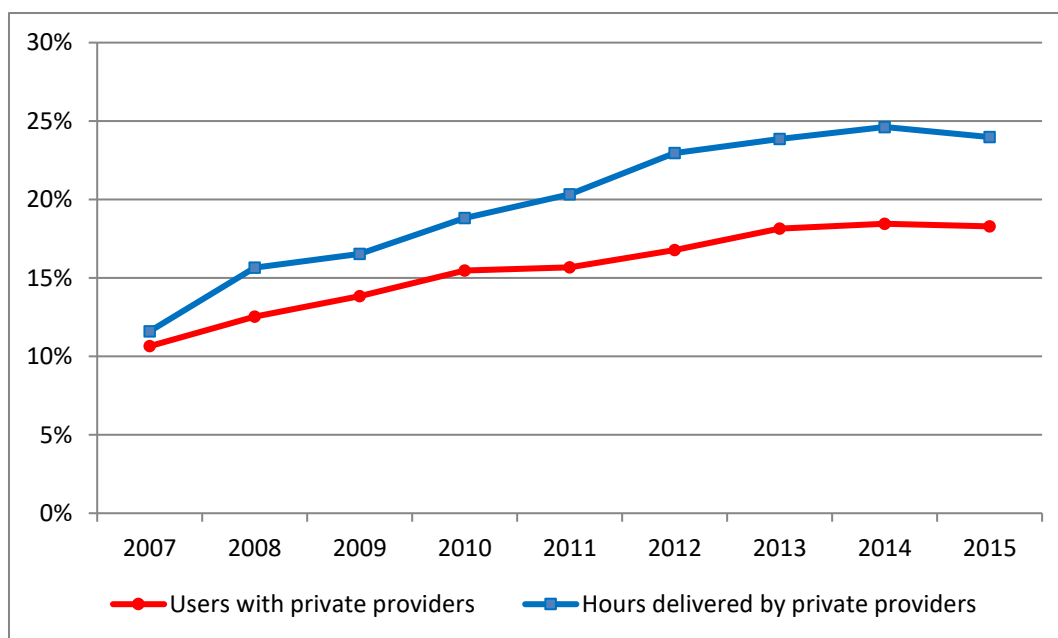


Figure 2. Private market share in home care. Source: The Swedish National Board of Health and Welfare.



Compared with nursing homes, home care is characterized by low entry and low switching costs. Service quality is also easier to evaluate, both because the service is less complex and care intensive and because the customers are younger and healthier. Also relative to health care, home care has low entry costs and a more limited role for professional expertise. Schools are closer when it comes to entry costs but have higher switching costs, while the social objectives also diverge more from those of the pupils and parents, than is the case for home care. The tax financed market for home care in Sweden is, we argue, thus very close to the ideal quasi-market.

### 3. Data and Descriptive Statistics

Our main outcome variable measures average user satisfaction among recipients of home care in Swedish municipalities. User satisfaction has been measured by NBHW in a national survey which was introduced in 2008 and has thereafter been conducted annually between 2010 and 2016. The survey is large: initially about 50 percent of all people with tax financed home care were invited and since 2013, the survey is distributed to everyone in the target group. The response rate has varied between 67 and 72 per cent.

Since the user-satisfaction measure was modified in 2012, we have standardized the variable, in line with a large literature on educational outcomes that relies on standardized test scores (e.g., Rockoff 2004; Gentzkow and Shapiro 2008). From 2008 to 2011, the users were asked to rate, on 1–10 scales, how satisfied they were overall with their elderly care, to what extent their expectations were met and how close to perfect the services they had received were. From the three responses from each respondent, a 0–100 index was constructed and municipal averages were calculated. Since 2012, the satisfaction measure captures the share of respondents in a municipality who reply that they were either “very satisfied” or “rather satisfied” when asked how satisfied or unsatisfied they were with their home care in general (the other reply alternatives are “neither satisfied nor unsatisfied”, “rather unsatisfied” and “very unsatisfied”). In each of the two periods 2008–2011 and 2012–2015 we then standardized the municipalities’ average score by the overall mean and standard deviation.

The key explanatory variable of interest is the reform year (see Figure 1). We obtained this variable from the Swedish Association of Local Authorities and Regions (SKL).<sup>7</sup> We include control variables for population density, age structure, education level, employment status, income and share of immigrants (all obtained from Statistics Sweden). We also use the market share of private providers, the costs for home care, the number of old people receiving home care, and the number of hours of home care (obtained from the Swedish National Board of Health and Welfare). Descriptive statistics at the municipality-year level for the period 2008–2015 are reported in Table A1 in Appendix A.

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<sup>7</sup> During our period of study, three municipalities (Fagersta, Kristinehamn and Södertälje) have abolished their free-choice system after having implemented it. This is taken into account in the empirical analysis.

## 4. Empirical Strategy

Our empirical strategy exploits that fact that the municipalities that have implemented the Free-Choice Act have done so in different years. We investigate whether there is a level shift in user satisfaction after reform implementation. The empirical approach is a fixed-effects regression framework in which we control for municipality fixed effects, year effects and relevant economic and sociodemographic variables.

Since our unit of observation is the municipality and since very few old people with home care move across municipal borders we avoid bias due to screening by care providers or selection by care recipients. In short, we estimate the following empirical model:

$$User\ satisfaction_{i,t} = \alpha + \beta_0 \cdot Free\ Choice\ Act_{i,t} + \beta \cdot X_{i,t} + \gamma_i + \delta_t + \varepsilon_{i,t}$$

where sub-index  $i$  and  $t$  indicate municipality and year, respectively,  $\beta_0$  is the key parameter of interest,  $\beta$  is a vector of parameters corresponding to  $X_{i,t}$ , a vector of control variables. The fixed-effect vectors are  $\gamma_i$  for municipal effects and  $\delta_t$  for time effects and  $\varepsilon_{i,t}$  is the error term.

In similarity to Bergman et al (2016), the models are estimated with weighted least squares (WLS). Since *User satisfaction* is measured as the average in each municipality, its variance is inversely proportional to the square root of the number of users in a municipality. The weighting implies that the results will not be overly sensitive to the satisfaction of a few people living in small municipalities. Inference is performed with standard errors clustered at the municipal level, since the reform variable varies at this level (cf. Angrist and Pischke 2009).

In order to explore possible causal mechanisms, in some specifications we include different cost measures and the share of private provision as controls. The introduction of free choice may cause costs to increase, as the elderly will more likely receive the home care they have been entitled to.<sup>8</sup> Alternatively, the introduction of competition might reduce the cost per hour. In consequence, the net effect might equal zero or go in either direction. In order to get a fuller picture of the cost side, we estimate the effect of the introduction of free choice on the number of people receiving home care, the total number of hours of home care, the cost per user, and the cost per person 65 years or older, using a similar econometric setup as in the above equation.

## 5. Results

In this section, we present the results for our regressions models. Table 1 contains the first results with User satisfaction as the dependent variable for the time period 2008–2015.

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<sup>8</sup> However, the introduction of competition may bring about a reduced cost per hour, so the overall effect is a priori indeterminate.

**Table 1. User satisfaction and the Free-Choice Act**

	1.	2.	3.
Free-Choice Act	0.163 (0.253)	0.251** (0.084)	0.233** (0.081)
Population density			0.0002 (0.0006)
Share old (65+)			-13.323* (6.738)
Share employed (16–64)			-4.124 (3.244)
Share educated (25+)			-9.284 (8.963)
Share immigrants			0.134 (5.041)
Municipality fixed effects	No	Yes	Yes
Year dummies	No	Yes	Yes
Number of observations	2004	2004	2004
R-squared	0.006	0.02	0.14

Notes: The dependent variable is *User satisfaction*. The variable Free-Choice Act is coded 1 from the year the Act was implemented (and in three municipalities until the year the implementing was reversed). Estimation is performed with weighted least squares (WLS) for the period 2008–2015 using the square root of the number of people receiving home care in 2015 as weights. Standard errors clustered at the municipality level within parentheses. \*\* denotes statistical significance at the 1% level. \*denotes statistical significance at the 5 % level.

When we control for municipal and time fixed effects, the effect of the free-choice reform becomes positive and significant. The standardized user satisfaction increases with about one quarter of a standard deviation. To set this in perspective, this corresponds to the median municipality improving its position to the 60<sup>th</sup> percentile. Only one of the control variables, Share old, obtains statistical significance and indicates that an increase in the share of people who are at least 65 years old by 1 standard deviation (6.3 percentage points) is associated with a decrease in user satisfaction of 0.83 standard deviations.

Table 2 incorporates the effect of introducing free choice on the market share of private providers. As can be seen in column 1 in Table 2, the introduction of the free choice reform is followed by an increased market share of the private providers of 2.4 percentage points (the average private share is 7.6 percent in our sample). According to the estimates in column 2, such an increase (of 2.4 percentage points) in the private share is associated with an increase in User satisfaction of 0.005 SD, a tiny effect which is also far from being statistically significant. In line with this, the estimate of the Free-Choice Act variable when including the private share (in column 3) is very close to the same estimate when not including the private share (in Figure 1, column 3).

We conclude that the effect of the Free-Choice Act on user satisfaction does not appear to work via an increase in the market share of private providers.

**Table 2. Privatization and the Free-Choice Act**

	1. Share of home care delivered by a private organization	2. User satisfaction	3. User satisfaction
Free-Choice Act	0.024** (0.006)		0.224** (0.081)
Private share		0.397 (0.440)	0.310 (0.421)
Population density	0.0001 (0.0001)	0.0001 (0.0006)	0.0002 (0.0006)
Share old (65+)	-0.278 (0.632)	-15.100* (6.877)	-13.314* (6.586)
Share employed (16–64)	0.293 (0.223)	-4.177 (3.258)	-4.244 (3.257)
Share educated (25+)	1.745 (1.232)	-6.929 (8.983)	-9.430 (8.926)
Share immigrants	0.289 (0.401)	1.011 (4.978)	0.154 (4.988)
Municipality fixed effects	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes
Number of observations	2317	2002	2002
R-squared	0.32	0.13	0.14

Notes: The dependent variable in column 1 is the share of home care delivered by a private organization. The dependent variable in column 2 and 3 is User satisfaction. The variable Free-Choice Act is coded 1 from the year the Act was implemented (and in three municipalities until the year the implementation was reversed). Estimation is performed with weighted least squares (WLS) for the period 2008–2015 using the square root of the number of people receiving home care in 2015 as weights. Standard errors clustered at the municipality level within parentheses. \*\* denotes statistical significance at the 1% level. \*denotes statistical significance at the 5 % level.

Table 3 reports estimates of how measures of the volume of home service and its cost respond to the introduction of free choice. We measure volumes either as the (log of the) total number of elderly receiving home care in the municipality or the total number of hours they receive. Costs are measured as the cost per user.

**Table 3. Volume, costs and the Free-Choice Act**

	1. Log of number of people with home care	2. Log of total hours of home care	3. Cost per user
Free-Choice Act	0.026 (0.023)	0.044 (0.023)	6871 (5251)
Controls	Yes	Yes	Yes
Municipality fixed effects	Yes	Yes	Yes
Year dummies	Yes	Yes	Yes
Number of observations	1728	2280	2271
R-squared	0.26	0.01	0.24

Notes: The dependent variable is given at the top of each column. The variable Free-Choice Act is coded 1 from the year the Act was implemented (and in three municipalities until the year the implementation was reversed). The control variables are the same as in Table 1. Estimation is performed with weighted least squares (WLS) for the period 2008–2015 using the square root of the number of people receiving home care in 2015 as weights. Standard errors clustered at the municipality level within parentheses. \*\* denotes statistical significance at the 1% level. \*denotes statistical significance at the 5 % level.

None of the estimated parameters associated with our dependent variables are statistically significant, although the point estimates are consistent with free choice increasing volumes and costs. Taken together, the estimates in this section suggest that users are more satisfied because of new choice opportunities, whereas effects of competition and private provision seem to be absent.

## 6. Potential problems and sensitivity tests

In this section we address potential problems with our identification strategy and perform several sensitivity tests.

### 6.1 The standardization of the user satisfaction measures

First, we address the measurement issue of basing our main dependent variable on two different surveys. We have one measure of user satisfaction for the period 2008–2012 and another measure for the period 2013–2015. Although we normalize the measures in order to make them comparable, we cannot fully eliminate the risk of picking up differences in survey design. Therefore, we estimate the model for each period separately. The results are reported in Table

4, and they are very close to the results from the full period 2008–2015 regressions (reported in Table 1). The coefficient of interest increases from 0.233 to 0.262 in column 1 and to 0.245 in column 2. However, only the column 1 estimate for the longer period 2008–2012 is statistically significant. Still, based on the similarity of the estimates, we conclude that the results are not an artifact of using two different satisfaction measures.

**Table 4. User satisfaction and the Free-Choice Act 2008–2012 and 2013–2015**

	1. 2008–2012	2. 2013–2015
Free-Choice Act	0.262** (0.078)	0.245 (0.214)
Population density	-0.001 (0.001)	-0.0003 (0.0008)
Share old (65+)	-14.729 (13.719)	-25.812* (12.612)
Share employed (16–64)	-10.538** (4.043)	-0.955 (5.227)
Share educated (25+)	-25.601 (13.847)	-9.339 (18.697)
Share immigrants	3.245 (8.251)	-7.593 (5.573)
Municipality fixed effects	Yes	Yes
Year dummies	Yes	Yes
Number of observations	1143	857
R-squared	0.11	0.16

Notes: The dependent variable is *User satisfaction*. The variable Free-Choice Act is coded 1 from the year the Act was implemented (and in three municipalities until the year the implementation was reversed). Estimation is performed with weighted least squares (WLS), in column 1 with the square root of the number of people receiving home care in 2012 as weights and in column 2 with the square root of the number of people receiving home care in 2015 as weights. Standard errors clustered at the municipality level within parentheses. \*\* denotes statistical significance at the 1% level. \*denotes statistical significance at the 5 % level.

## 6.2 Selection into treatment

There may be selection on idiosyncratic temporary shocks such that municipalities that are currently experiencing problems in their in-house production of home care services are more likely to launch a free-choice system – as a possible remedy for the current problems or in order

to show political willingness to take action. It may also be that the problems would eventually have been resolved also without a reform. A naïve estimation of the reform effect may then bias the estimated effect upwards, similar to the phenomenon known as Ashenfelter's Dip in the literature on labour market program evaluation.

Looking at the pre-reform period, we test whether the residuals from a regression of *Satisfaction* on control variables plus year and municipality dummies are lower than usual the year before reform implementation. We find that the residuals are instead larger than usual in the year right before the reform, although the difference of 0.52 units is not statistically significant. In other words, there is no indication of municipalities selecting into treatment by reforming their home care system in response to unusually dissatisfied users.

### *6.3 Does the reform effect change over time?*

So far, we have assumed the reform effect to be constant. Obviously, this need not be the case and several alternatives are possible. The effect could become stronger or weaker over time, or it could need some time to materialize. To investigate this we estimate a model with year specific reform effects. In Table 5 below, the variables *Free-Choice Act X* indicate the coefficient for year X after reform implementation ( $X=0, 1, \dots, 6$ ). According to the estimates, the reform effect strengthens over time. The estimated effect on Satisfaction is positive in all years, but smallest and statistically insignificant in the year of implementation (*Free-Choice Act 0*). One year after implementation, the estimated effect is about as large as the constant effect estimated in Table 1, column 3. The point estimates increase year by year and six years after implementation, the estimated effect is twice as large as the effect one year after implementation.

**Table 5. User satisfaction and year specific reform effects**

	1.
Free-Choice Act 0	0.134 (0.076)
Free-Choice Act 1	0.234* (0.094)
Free-Choice Act 2	0.334** (0.103)
Free-Choice Act 3	0.468** (0.128)
Free-Choice Act 4	0.498** (0.132)
Free-Choice Act 5	0.545** (0.147)
Free-Choice Act 6	0.584** (0.197)
Population density	0.000 (0.001)
Share old (65+)	-9.159 (5.670)
Share employed (16–64)	-3.067 (3.138)
Share educated (25+)	-16.047 (8.777)
Share immigrants	1.222 (5.274)
Municipality fixed effects	Yes
Year dummies	Yes
Number of observations	2004
R-squared	0.13

Notes: The dependent variable is *User satisfaction*. The variable Free-Choice Act is coded 1 from the year the Act was implemented (and in three municipalities until the year the implementation was reversed). Estimation is performed with weighted least squares (WLS) with the square root of the number of people receiving home care in 2015 as weights. Standard errors clustered at the municipality level within parentheses. \*\* denotes statistical significance at the 1% level. \*denotes statistical significance at the 5 % level.



#### 6.4 Municipalities abandoning free choice

As mentioned, three municipalities have abandoned the free choice act after implementing it. Although this is reflected in the variable *Free-Choice Act*, those three municipalities could be different than the others. We have therefore excluded the three municipalities from the Table 1 regressions to see whether the estimates are affected. When doing so the coefficients for the variable *Free-Choice Act* increase up to 4 percent, a small change which is far from statistically significant.

### 7. Discussion

Home care to the elderly makes for a relatively frictionless market without major information asymmetries. The market is therefore of wider significance, by providing information of what can be achieved in an ideal quasi market. The relative low levels of corruption in Sweden strengthens this argument further. There will always be opportunities for corruption when private companies are paid by public monies. More corrupt countries may have more to gain from full-fledged privatization compared with quasi-markets.

Since the free-choice reform was gradually implemented in more than half of Sweden's municipalities, we can evaluate its consequences. We find that the reform, which standardized the market by combining freedom of choice and freedom of entry, led to a larger private market share and higher user satisfaction without significantly increasing costs. The increase in user satisfaction is about one quarter of a standard deviation, which corresponds to lifting the median municipality to slightly above the 60<sup>th</sup> percentile. Since the increase in satisfaction is unrelated to the private market share, the underlying mechanism seems to be based on choice opportunities rather than competition or an advantage of private providers.

Given the characteristics of home care, what can we expect from quasi-markets for other public services? While this is an empirical question of its own, the stylized case of home care provides some insights. For similar services, such as personal assistance to the disabled, user satisfaction is a relevant measure of quality, and the evidence from home care suggests that choice models could provide moderate improvements. For other tax-financed services, user satisfaction risks being misleading. Lenient grading and a warm reception could produce satisfied students and patients without improving the essential quality of education and health care. For such services, user satisfaction has to be evaluated together with other indicators. In fact, the modest benefits in home care suggests that additional mechanisms are needed to support arguments in favor of quasi-markets for more complicated services.

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## Appendix A. Variables and Descriptive Statistics

Table A1. Descriptive statistics

Variable	Definition	Mean	Std. Dev.	Min	Max	No. Obs.	Source
Satisfaction	Two standardized satisfaction measures, an index measure 2008–2011 and the share of satisfied users 2012–2015. See section 3 for details.	0	1.000	-4.909	3.091	2004	The National Board of Health and Welfare
Free-Choice Act	Dummy variable equal to one if the municipality has a system of choice according to the Free-choice act in operation.	0.378	0.485	0	1	2030	Swedish Association of Local Authorities and Regions
Private share	Share of users with home care delivered by a private organization	0.076	0.170	0	1	2027	The National Board of Health and Welfare
Number of people with home care	Number of persons who have received home care services at some time during the year, based on individual records.	557	0	1100	15 382	1729	The National Board of Health and Welfare
Total hours of home care	Total number of hours of home care in October, based on a yearly survey to all municipalities.	17 208	38 857	0	599 951	2298	The National Board of Health and Welfare
Costs per user	Annual costs in SEK per user of home care	203 077	76 230	47 483	621 735	2271	Kolada
Population density	Inhabitants per square kilometer	141.014	495.303	0.2	5307.6	2030	Statistics Sweden
Share old (65+)	The number of people who are 65 years or older as a share of the municipality's total population.	0.098	0.062	0.013	0.581	2030	Statistics Sweden
Share employed (16–64)	The number of gainfully employed in the 16–64 age group as a share of the municipality's total population in that age group.	0.735	0.376	0.575	0.833	2030	Statistics Sweden

Share educated (25+)	The number of persons with a post-secondary education, 3 years or more, as a share of the municipality's population in the age group 25 years or older.	0.144	0.061	0.064	0.476	2030	Statistics Sweden
Share immigrants	The number of people who were born abroad as a share of the municipality's total population.	0.117	0.057	0.034	0.404	2030	Statistics Sweden

Notes: One observation refers to one year in a municipality. The year of 2009 is excluded since there was no user survey conducted in that year.