

BROADENING PERSPECTIVES ON SOCIAL POLICY

# REFORMING LONG-TERM CARE IN EUROPE



*Edited by*  
Joan Costa-Font

 WILEY-BLACKWELL



# **Reforming Long-term Care in Europe**

## **Broadening Perspectives on Social Policy**

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## *Editorial Introduction*

**Joan Costa-Font**

Welcome to this book on European long-term care reform. Hopefully, you will find a very relevant set of chapters that we expect will influence the scholarly and policy debates on how best to reform the financing and organization of long-term care in Europe.

All contributors to this book have focused on an issue regarding the reform of long-term care (LTC) in their specific country of study. That is, they attempt to explain reforms in LTC provision and financing by focusing on a central issue in the social policy debate in their countries. The central theme has been left to the author's choice, and the aspects discussed in each country are arguably a good picture of the most relevant country-specific policy questions. Furthermore, the country case studies under analysis have been selected on the basis of the existing (or lack of) evidence on the ongoing reforms in each country, and the existing literature about it. For instance, very little has been written so far on LTC reform in Eastern European countries, and almost no research is available on the reasons for reform or non-reform of LTC in Southern Europe. It was perceived that more research should be done on the sustainability of LTC financing in established systems such as the Dutch one, and on the reforms in France.

The chapters you will find in this book can be divided into two sections. The first section contains six chapters dealing with reforms in the financing of long-term care, and includes conceptual contributions alongside empirical studies from different countries in Europe, including reforms in the UK, the Netherlands, France, Germany and Eastern Europe. Then a second section looks at contributions on the reform of the organization of LTC in Spain, Italy, Sweden and Portugal.

The first chapter, by Nicholas Barr, provides an overview of traditional claims in favour of social insurance as a means of funding LTC. In particular, it examines its economic rationale and highlights that an entitlement to care is made clear in the event of old-age dependency. The second chapter, by Adelina Comas-Herrera, Raphael Wittenberg and Linda Pickard, contains an examination of policy developments in reforming LTC in the UK. It describes the rationale for reform in Britain, drawing upon the evidence of the Royal Commission and the institutional and policy designs that explore the role of choice and the provision of care. This chapter is followed by a chapter by Blanche Le Bihan and Claude Martin that examines the policy discussions

that have grounded reform of LTC in France. Next, the experience of financial reform and stability of the financing of LTC in the Netherlands is evaluated in a chapter by Frederik T. Schut and Bernard van den Berg. As an example of a system of social insurance, the following chapter, by Heinz Rothgang, provides an analysis of the reforms in financing of LTC in Germany. This section is completed with a final chapter by August Österle that explores financing reforms in Central and South-Eastern Europe, where evidence from seven countries is reported: Croatia, the Czech Republic, Hungary, Romania, Serbia, Slovakia and Slovenia.

The second section discusses reforms in the organization of long-term care. This section contains three chapters. The first, authored by myself, examines the political economy of long-term care reform (and absence of reform) in Italy and Spain; I draw specifically upon the influence devolution played as a source of reform and fragmentation in Spain, and against reform in Italy. Next, reform and the question of the local variability of LTC services in Sweden is discussed by Gun-Britt Trydegård and Mats Thorslund. The final chapter is by Silvina Santana, and deals with the formal and informal settings of LTC in Portugal, focusing on two aspects: service quality and problems with the organization of care, which are essential in understanding developments in Portugal.

This book would not have been possible without the enthusiastic reception by the editorial committee of the journal, and particularly Bent Greve, and the always altruistic help of anonymous referees, which we acknowledge here. Particularly, we wish to thank Cristiano Gori, Bleddyn Davies, Andreas Hoff, Guillem Lopez Casanovas, Ana Guillén, Anna Maria Simonazzi, Birgit Trukeschitz, Martin Powell, Martin Karlsson, Carla Rodríguez, Jolanta Aidukaite, Lucia Kosarova, Jérôme Wittwer, Christophe Courbage, Javier Hernandez, Gerdt Sundström and Francesca Bettio. Some chapters did not make it into the book due to our tight timing and our quality constraints, but as usual we hope that the motivation of participating in the book was an incentive to improve and/or complete them. Finally, I hope you enjoy reading this book as much as we enjoyed preparing it.

# 1

## *Long-term Care: A Suitable Case for Social Insurance*

**Nicholas Barr**

### **The Backdrop**

This chapter discusses the finance of long-term care (LTC), including care in a person's own home (domiciliary care) and residential care, including nursing care. I argue that there are welfare gains from being able to insure LTC expenditures, but the mechanism of actuarial insurance is not well suited to the risks associated with needing long-term care.

The remainder of this section explains why the ability to insure is beneficial and how the actuarial mechanism works. The next two sections discuss in turn the technical problems facing providers of long-term care insurance and the information problems facing individuals looking to buy such insurance, that is, problems on both supply and demand sides of the insurance market. The following section considers a range of solutions, including finance from general taxation and social insurance. The final section offers some strategic conclusions.

#### *Why insurance?*

In the right circumstances, insurance has powerful advantages, both in efficiency terms and from a moral perspective.

*Efficiency arguments.* To illustrate the potential welfare gains from insurance, assume that high-quality long-term care costs €30,000 per year, that one in six people needs long-term care and, if so, needs it on average for two years. Thus the typical person needs long-term care for one-third of a year, at a cost of €10,000.

In principle, there are two ways in which a person could seek to finance such costs.

- Actuarial insurance: if it is possible to buy insurance at an actuarially fair price (and ignoring transaction costs), a person has to save enough to cover the *average* duration, e.g. one-third of a year = €10,000.

- Self-insurance: in a world with no insurance, a person who seeks security must save enough to cover the *maximum* potential duration of long-term care, e.g. 20 years at €30,000 per year = €600,000.

Thus the welfare gains from insurance are large and obvious: a person who is risk-averse does not have to set aside €600,000, but instead pays insurance premiums which (in present value terms) total €10,000. A core conclusion is that insurance dominates self-insurance.

*Moral arguments.* The philosopher John Rawls (1972) argues that in a just society the rules are made by people who do not know where they will end up in that society, that is, they are made behind what he called the Veil of Ignorance. Insurance can be interpreted as an example of solidarity behind the Veil of Ignorance: a person who joins a risk pool does not know in advance whether or not he will suffer a loss and hence have to make a claim. Insurance thus has moral appeal.

#### *How actuarial insurance works*

The easiest way to see how actuarial insurance works is by example. Suppose that there are 100 of us, that we decide to fly to Rome to see a football match, that each of us has a suitcase worth €1,000, and that on average 2 per cent of suitcases get lost. Thus each of us faces a potential loss,  $L$ , of €1,000, which occurs with a probability,  $p$ , of 2 per cent. In those circumstances, it would be possible to collect  $2\% \times €1,000 = €20$  from each of the 100 people, i.e. €2,000 in total; in Rome, we would find which two people had lost their suitcase, and pay each €1,000 in compensation.

More formally, the actuarial premium for the  $i$ th individual,  $\pi_i$ , is defined as:

$$\pi_i = (1 + \alpha) p_i L \tag{1}$$

where  $p_i L$  is the individual's expected loss, and  $\alpha$  is the loading the insurance company charges to cover administrative costs and competitive profit;  $\pi$  is the price at which insurance will be supplied in a competitive market. For the purposes of this chapter, insurance is actuarial if, as in equation (1), the premium is based on the risk of an event occurring and the size of the resulting loss.

The intuition of this mechanism is straightforward. Insurance premiums are high where the probability of loss is high (a young car driver) or where the potential size of the loss is large (driving a Rolls Royce).

This, broadly, is the way in which actuarial insurance operates. Thus far there is no need for state intervention. A rational risk-averse person facing a known risk will buy insurance, which the market can and will supply.

## **Problems for Insurers**

### *Technical problems on the supply side*

Insurance along the lines of equation (1) is efficient only if a number of conditions hold. Where they fail, actuarial insurance may be inefficient or impossible.

*Individual risk, not common shock.* Insurance requires that the probabilities in equation (1) are independent, that is, that there are a predictable number of winners and losers. This applies to car accidents (if I crash my car, this does not affect the likelihood that you will crash your car). With a common shock, in contrast, if one person suffers a loss, so does everyone else. If I suffer 5 per cent inflation this year so, broadly, does everyone else. Actuarial insurance generally cannot cope with common shocks.

*Risk, not certainty.* Insurance is a device to accommodate risk. Thus  $p_i$  in equation (1) must be less than one. If  $p_i = 1$ , it is certain that the insured person's car will be stolen, and the insurance premium will exceed the insured loss. There is no possibility of spreading risks, hence no gain from joining a risk pool. The problem arises in two ways with medical insurance. First is old age: the probability of elderly people requiring medical care is high. A separate problem is pre-existing medical conditions: actuarial insurance can cover *potential* problems, but not *actual* problems, that is, medical problems which the individual already has at the time that he/she applies for insurance. Pre-existing medical conditions are generally uninsurable.

The two conditions just discussed relate to the fundamental nature of insurance as a device for sharing risk. The remaining conditions reflect information problems in insurance markets.

*Risk, not uncertainty.* The insurer needs to estimate  $p_i$  in equation (1) with reasonable precision in order to calculate a premium. Insurance can cope with risk (where the probability is known) but not with uncertainty (where it is not).<sup>1</sup> There are various circumstances in which the probability might not be well known.

- Where the insured event is rare (e.g. early satellite launches), estimates of the probability will have a large variance.
- Where the problem is complex. Actuarial insurance against future inflation is impossible because the probability of different levels of future price increases cannot be predicted.<sup>2</sup>
- Where the insured event has a long time horizon.

A further condition is that all participants – both buyer and seller of insurance – must be equally well informed. The failure of this condition – asymmetric information – creates two further potential problems: adverse selection and moral hazard.

*Adverse selection.* Efficient insurance requires that high-risk individuals pay a premium calculated from equation (1), based on a high probability of loss,  $P_H$ , and low-risk individuals pay a premium based on their low probability,  $p_L$ . With automobile insurance, someone who is twice as risky pays roughly twice the insurance premium.

Adverse selection arises where the buyer can conceal from the insurer the fact that he is a bad risk, and is thus an insurance-market manifestation of 'lemons' (Akerlof 1970). The problem is not that people differ in their riskiness,

but that the insurer is less well-informed than the buyer about the applicant's riskiness. The individual knows he is a 'lemon' (i.e. a bad risk), but can conceal the fact from the insurer, hence the description of adverse selection as 'hidden knowledge'. The problem can arise if health care is an important part of employer benefits: firms with the best health-care packages will tend to attract workers with health problems, thus reducing the firm's competitiveness.

*Moral hazard.* A second class of asymmetric information, moral hazard, arises where the insured person can influence the insurer's expected loss,  $p_i L$  in equation (1), without the insurer's knowledge (hence moral hazard is sometimes described as 'hidden action'). The problem arises in two ways, concerning  $p_i$  and  $L$ , respectively.

1. *Endogenous probability:* here individuals can manipulate the probability of the insured event at little or no cost to themselves. If people are insured they might drive less carefully. My extra spending on maintaining the brakes on my car reduces the probability that I will have an accident. But the insurer cannot monitor such expenditure and so will reduce my premium not by the (significant) decline in the probability that I will have an accident but by the (much smaller) decline averaged across all the drivers it insures. Thus the main beneficiaries of my spending on safety are other insured people who now pay slightly lower premiums. Given this externality, individuals face incentives to underinvest in preventive activities. Moral hazard causes inefficiency, since people take less care than if they had to bear the full loss themselves.

A second manifestation of endogenous probability arises where insurance is concerned not with an undesirable event that is beyond the individual's control but with a desirable event that the individual can choose, the standard example being voluntary pregnancy. Individuals face no psychic cost, and can control the probability,  $p_i$ , in equation (1). This situation is very different from an unwelcome exogenous event – the problem insurance is meant to address. Cases of this sort are generally uninsurable for individuals.<sup>3</sup>

2. *Endogenous  $L$*  (the 'third-party payment problem'): here the individual can influence the size of the insured loss,  $L$ . The intuition is straightforward – contrast the amount of champagne people drink if they pay for it themselves with their consumption of champagne provided free by the airline. Similarly, if the insurer pays all medical costs, both doctor and patient can act as though health care were free, even though its social cost is positive, and generally large. Moral hazard in this form leads to inefficiently high spending.

The problem of moral hazard is fundamental: the more complete the cover and the lower the psychic loss from the insured event, the less individuals have to bear the consequences of their actions and the less, therefore, the incentive to behave as they would if they had to bear their losses themselves.

One way of seeking to reduce the problem is through inspection of damage before meeting a claim, for example with automobile repairs. An

alternative is to use incentive mechanisms, by sharing the cost between the individual and the insurer: frequent claimants (e.g. accident-prone car drivers) pay higher premiums; deductibles require the insured person to pay the first € $X$  of any claim, coinsurance to pay the first  $x$  per cent. None of these approaches, however, faces the individual with the full marginal cost of any loss.

In analytical terms, adverse selection and moral hazard are both examples of imperfect information. If the insurer could read the thoughts of insurees there could be no hidden knowledge or hidden action.

### *Problems with long-term care insurance*

When considering long-term care insurance it is helpful to distinguish two probabilities:

- $p_1$  is the probability that a person will need care at some stage in his/her life;
- $p_2$  is the probability distribution, *given that a person needs care*, of different durations of that care.<sup>4</sup> If we assume that once someone needs care they will do so for the rest of their life this probability equals remaining life expectancy at the time a person first needs care.

When applied to long-term care, equation (1) becomes:

$$\Pi_i = (1 + a) p_{1i} L(p_{2i}) \quad (2)$$

where  $p_{1i}$  is the probability that the  $i$ th person will need long-term care at some stage, and  $L(p_{2i})$  is the cost of care conditional on the person's remaining life expectancy at the date he or she first needs care.

To what extent does long-term care conform – or fail to conform – with the conditions in the previous section?

*Independence.* Probabilities of needing long-term care may not be independent. If a medical advance prolongs life to the point where more people end up needing care (i.e. an increase in  $p_1$ ), the result is to increase the probability of needing long-term care for *all* policy-holders. This outcome would arise, for example, with dramatic progress in addressing cardiovascular disease and cancer, but much less in addressing dementia, since more people would live to ages where dementia arises. Similar issues can arise with  $p_2$ , for example, a medical advance that increases the average life expectancy of people in care.

*Uncertainty.* This is a problem for both (a) the relevant probabilities and (b) the costs of care. Each requires discussion.

*Case 1: buying insurance when young.* Let us start with a young person wanting to buy insurance. Insurers have a broad idea of  $p_1$  and  $p_2$  for today's frail elderly. What they need to know, however, are the relevant probability distributions for *future* cohorts.

Over the medium term, neither probability is known, since each can change over a long time horizon (a person aged 30 buys a policy under which he might not make a claim for 60 years).

- $p_1$  might get smaller because medical advances help people to care for themselves (e.g. tablets that deal with arthritis) or because of technical advances with the same effect (e.g. cheap robots doing household chores for housebound arthritics). On the other hand, medical progress, by extending life, might increase the likelihood of requiring care.
- $p_2$  might get smaller because medical advances keep people out of care for longer, so that remaining average life expectancy at the time care starts is less. On the other hand, if medical progress extends the duration of dependent life, the probability might increase.

Thus the relevant probabilities cannot be known far in advance, and even the direction of change is unknown. Over such a long time horizon, the issue becomes one of uncertainty rather than risk.

*Case 2: buying insurance at the time a person needs care.* There is a tension between encouraging people to buy a policy at a younger or an older age. With younger people, the range of uncertainty facing the insurer is greater but so are the gains to the individual from risk-pooling. With older people, uncertainty is less but, since some people now have a high probability of requiring care, the opportunity of risk-pooling is reduced.

The limiting case arises where a person takes out insurance only when he/she needs care. In this case, there is no uncertainty about  $p_1$ , which equals one. Nor is there a major problem about  $p_2$  which, at its simplest, is the person's remaining life expectancy, that is, his/her longevity risk. In this case, long-term care insurance is equivalent to buying an annuity that pays € $X$  per year for the rest of a person's life, where € $X$  is the annual cost of care.

How do the two cases compare? Let us return to the earlier example, where care costs €30,000 per year and one in six people needs long-term care and, if so, needs it on average for two years. Thus, ignoring transaction costs:

- Buying insurance when young: if the probabilities are known, a representative person needs care for one-third of a year, and so can buy insurance for €10,000, i.e. one-third of €30,000.
- Buying insurance when care is first needed: a person entering long-term care typically needs it for two years, so that the relevant annuity costs €60,000, i.e. two years at €30,000 per year. A deferred annuity (e.g. one that pays for care only after the first two years, but thereafter for life) would be cheaper because insurance cover is only partial.
- With no insurance, the person has to save for (say) 20 years, i.e. €600,000. This is true whether we are talking about simple private savings or such devices as a long-term care savings account, and whether or not there are tax incentives towards such saving activities.<sup>5</sup>

In comparing these options, the welfare rankings are clear: Case 1 is superior to case 2, which is superior to no insurance. Wider risk-pooling dominates narrower risk-pooling; and insurance dominates self-insurance.

Thus far we have discussed uncertainty about  $p_1$  and  $p_2$ . Uncertainty about the annual cost of care,  $L$ , is a separate problem. It is well known that the relative cost of services rises over time.<sup>6</sup> But over the long term, the ability to predict the costs of care becomes questionable. Will costs rise because the cost of skilled labour rises? Or will expensive labour be partially replaced by cheaper capital (e.g. robots for some tasks) or by cheaper pharmaceutical drugs? As with uncertainty about the relevant probabilities, there is doubt even about the direction of change.

For both reasons – uncertainty about the probabilities and about costs – there is a considerable ‘funnel of doubt’ about total future spending on long-term care. The UK Royal Commission’s sensitivity tests suggest that the total could vary by a factor of two (£21 billion to £39 billion) in 2031, and by a factor of nearly three (£28 billion to £76 billion) in 2051 (UK Royal Commission 1999: table 5.1; see also Nuttall *et al.* 1995). In the face of such uncertainty, voluntary private insurance becomes highly problematical.

*Adverse selection.* As with medical insurance, the person buying insurance, knowing that s/he is a bad risk, might be able to conceal that fact from the insurer. Irrespective of reality, the efficiency of insurance markets suffers when insurers *think* adverse selection is a reality. Evidence from the USA (Sloan and Norton 1997) suggests that adverse selection, whether real or perceived, is a problem.

*Moral hazard.* This arises in two ways. A person who has insurance that covers all the costs of long-term care is more likely to demand care since the cost to him or her (at the time of use) is zero. This is the third-party payment problem familiar from medical insurance. There is an extensive literature on the range of instruments – incentive or regulatory – that seek to contain costs in such circumstances.

Incentive-based mechanisms to contain spending include:

- cost-sharing via deductibles (where the individual pays the first € $X$  per year) or co-payments (where the individual pays  $x$  per cent of the costs);
- preferred providers, whereby suppliers are chosen on the basis of competitive bidding;
- prospective payment mechanisms like health maintenance organizations or diagnosis-related groups.<sup>7</sup>

Regulation of spending includes:

- controlling the price that providers can charge;
- imposing an annual budget cap. This can take the form of a global annual budget for a hospital. Or the cap can be at the level of the individual physician. Or the cap can be on reimbursement of all physicians, for

example by retrospectively reducing agreed fees if physicians prescribe a greater volume of treatment than planned.

Long-term care faces most of these problems. In particular, if the insurance company pays all the costs, a person is more likely to request care and/or to request luxurious accommodation.

In contrast, a second aspect of moral hazard is very different from medical care. The third-party incentive increases the likelihood that a person will demand care. But in this case, the incentive applies not only to the policyholder but also to his or her family. Insurance cover changes the balance of probability between care from family members and care by others. To guard against being put into residential care against one's will, it could therefore be rational not to insure (Pauly 1990; Sloan and Norton 1997).

Thus insurers are imperfectly informed, and so design policies which reduce their exposure to risk in several ways. To guard against uncertainty, premiums err on the side of safety. There is a cap on the total payout per year (though not usually on the number of years), thus limiting  $L$  in equation (2). Insurers attempt to counter adverse selection by requiring full disclosure of an applicant's medical history, where a failure to disclose a 'relevant' fact invalidates the policy even where the insurer has not specifically asked for the fact. Attempts to guard against moral hazard include contracts which offer cover against tightly-defined criteria, rather than for a more general need for care.

## Problems for Individuals

Alongside these supply-side problems are problems from the perspective of individuals. Insurance policies for long-term care are both long-term and complex. As a result, consumers face many of the problems now widely recognized from the economics of information and behavioural economics. The following questions illustrate the problems individuals face in choosing an insurance policy in a competitive system.

What type of care is covered? Does the policy cover only residential care, or also domiciliary care; is a person entitled to residential care on the basis of general infirmity or only if he or she has clearly defined, specific ailments? How will the answers to these questions change with advances over the years in medical technology?

On what financial basis is care provided? Can the insurer increase premiums if a person becomes more risky (i.e. if  $p_1$  or  $p_2$  rises); is there a ceiling on the monthly cost of care; is there a maximum duration over which benefit is payable? Will those figures change over time in line with changes in prices, changes in wages, or changes in the cost of care?

How well specified is the contract? Can insurers change the basis of cover; does the wording make clear the circumstances in which an individual can make choices; what arrangements deal with any disagreements between the policyholder and the insurer?

Complications arise, further, because people may not know how much cover they actually have. If public funding becomes more generous, people

with extensive private insurance end up with an inefficiently large amount of cover. Conversely, cuts in public funding may leave people under-insured; and if such under-insurance occurs relatively late in life, additional private cover is expensive.

In the face of such complexities, Burchardt and Hills (1997: ch. 6) found that even their academic study could not unearth the data necessary for proper assessment of policies, calling seriously into question the ability of individuals to make informed choices. At a minimum, there is need for regulation to ensure that all policies cover at least a basic package.

### **Strategic Policy Directions**

Private, actuarial insurance works well for risks that conform with the conditions discussed earlier, for example, automobile insurance and burglary insurance. But that does not mean that the mechanism can be applied uncritically to other areas. The conclusion of earlier discussion is that the mechanism faces major technical problems when applied to long-term care. Given the range of problems facing both sides of the market, the conclusion of the UK Royal Commission on Long Term Care (1999: 93), should not be surprising:

Left to grow without intervention, there seems little reason to think that private insurance will become more important in the UK than it has become . . . in America. At present only 4%–5% of Americans have taken out long-term care insurance, while 10%–20% could afford to do so and 80%–90% could not afford the cost in any event.

#### *Social insurance as a response to information problems*

In his classic article, Kenneth Arrow (1963) argues that, where markets fail, other institutions may arise to mitigate the resulting problems: ‘the failure of the market to insure against uncertainties has created many social institutions in which the usual assumptions of the market are to some extent contradicted’ (1963: 967). This line of argument contrasts with that of Hayek (1945). Both Arrow and Hayek started from the assumption of asymmetric information. To Hayek the fact that different people know different things is an argument *in favour* of markets. He argued that (as with skill differences) the market makes beneficial use of such differences by allowing gains from trade.

Arrow shows that the market is an inefficient device for mediating certain important classes of differences in knowledge between people. Nor is his view idiosyncratic. When discussing unemployment, Lucas (1987: 62) reached an identical conclusion:

Since . . . with private information, competitively determined arrangements will fall short of complete pooling, this class of models also raises the issue of *social insurance*: pooling arrangements that are not actuarially sound, and hence require support from compulsory taxation. The main