

# Politics of social health insurance<sup>☆</sup>

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## Abstract

This paper studies the political support for social health insurance when a private alternative exists. Individuals differ only by their risk. For the more realistic distributions of risk, a majority of agents do not want public insurance. However, in a representative democracy, or in a direct democracy with altruistic agents, we show that social insurance can be adopted, particularly for treatments which have the best cost-utility output. But if the low risk agents are more politically powerful than the high risk, the low cost treatments will not be refunded by social insurance, even if their utility is high.

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## 1. Introduction

In this paper we study the political support for social health insurance when private insurance is available. The agents are differentiated by their risk of sickness. In this case, the median voter is against social insurance. However, we show that it can be adopted in a representative democracy or in a direct democracy with altruistic agents, for the illnesses which have treatments with a good cost-utility output.

In many countries, the health systems are weakened by a continuous increase in health care spending. Health spending is now 10.5% of GDP in Germany, 9.8% in France, with a record of 14% in the United States. This increase is higher than that of GDP and induces serious financing problems. It has three main causes: first a demographic factor, the ageing of the population, since the need for medical care is greater for older people. Secondly there is a technical factor, because with technological progress treatments are becoming more sophisticated and hence more expensive. And finally a political factor: the increase of the coverage. Indeed most OECD countries have evolved to offer wide coverage of their citizens.

With respect to the importance of the public health insurance, any project to reform the health system must be preceded by a thorough reflection on the respective places for public and private insurance. There are several arguments of economic efficiency in favor of public insurance: it has lower administrative costs, and it avoids adverse selection, since it is universal. It is also redistributive, thus more equitable. However, with the public insurance, the agents are less free, and it weighs on

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public taxation, which is distortive and unpopular. In all countries the public and private systems coexist, but their respective proportions vary. The Americans consider that health is the individual's responsibility and that of the market, the government must be involved only if necessary (as with Medicare or Medicaid). The Europeans attach more importance to the public sector, private insurance being mainly a complement.

In this paper we adopt a political economy approach: the aim is to determine the political support for public insurance when there is a private alternative. More precisely, we determine which treatments could be paid for by social insurance. It will depend on the health utility of treatment, and on its cost.

Public health insurance has a solidarity function. Numerous political economy models interpret this solidarity as a redistribution from the rich to the poor: [Epple and Romano \(1996a,b\)](#) and [Gouveia \(1997\)](#), using models where the agents are differentiated by their incomes, establish the existence of an equilibrium where the majority is in favor of public insurance. But this sort of redistribution can be achieved directly, without using health insurance, as shown by [Meltzer-Richard \(1981\)](#). The median voter is indeed poorer than the average, hence in favor of redistribution. In this case it is not a good way to justify the existence of public insurance. With a similar model, [Blomquist and Christiansen \(1999\)](#) add a strong hypothesis: that the qualification is private information, not available to the government.

It appears that to justify public health insurance, we must stress what distinguishes it from private insurance (with no asymmetric information): the mutualisation of different risks. Consequently, we study here the solidarity between agents differentiated by their risk of sickness, but with the same income. It allows us to better understand the mutualisation of risks, and to distinguish it from the redistribution between rich and poor. [Hindriks \(2001\)](#) and [Hindriks-De Donder \(2003\)](#) have tackled this question, but by dropping the expected utility model. Our aim is to establish the conditions of existence of public insurance (and the extent of its coverage) in the usual expected utility model, with agents differentiated by their risk, and in particular to determine which treatments would be covered by public insurance.

Two systems are possible in our paper: purely public and purely private. For a given treatment, no mixed insurance is possible. If public health insurance covers the treatment, we assume that it is compulsory and offers full coverage. Otherwise, it is well known that, by an adverse selection mechanism, only high risk people will take it, so public insurance then no longer has a solidarity function. There is here no moral hazard: if a person is sick, she has only one possible treatment (no partial treatments). Without public insurance, the agents can subscribe to private insurance, or choose not to take any treatment.

We show that the people having a lower than average risk (the majority here) would prefer a priori to reject public insurance. The other people want it if the output of the treatment is sufficiently high<sup>2</sup>, in a meaning specified later. We study the conditions necessary to adopt a social system, even though it is contrary to the interest of a majority.

The paper is organized as follows. The second section presents the model. The political economy of the choice of health insurance system is studied in the third section. The fourth section is devoted to equity aspects. We conclude in Section 5.

## 2. The model

### 2.1. Health financing and agents' welfare

We consider an economy with  $n$  individuals, all with the same income  $y$ . They can be healthy or sick. The probability  $p$  of falling ill depends on the agent. This risk  $p$  is distributed in the population on the interval  $[0; 1]$  according to the cumulative distribution function  $F(p)$ .

A healthy person has a utility  $U(y)$ , a non-treated sick person has a loss of utility  $V > 0$ , her utility is then  $U(y) - V$ . We assume that there is no loss of income due to the illness. An agent of risk  $p$  (i.e. with probability  $p$  of falling sick) enjoys then an expected utility without treatment:

$$W_1(p) = U(y) - pV \quad (1)$$

$U$  is an increasing and concave function.

We assume that the illness the agents can contract requires a treatment of cost  $H > 0$ , and it leads to a complete recovery. The treatment is of the type "all or nothing", it is pointless to take only a part of it. Our model is grounded on a cost-utility

<sup>2</sup> It will always be true for a fatal illness, since the utility gain is then  $V = +\infty$ .

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