A median voter model of health insurance with ex post moral hazard

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Abstract

One of the main features of health insurance is moral hazard, as defined by Pauly [Pauly, M.V., 1968. The economics of moral hazard: comment. American Economic Review 58, 531–537), people face incentives for excess utilization of medical care since they do not pay the full marginal cost for provision. To mitigate the moral hazard problem, a coinsurance can be included in the insurance contract.

But health insurance is often publicly provided. Having a uniform coinsurance rate determined in a political process is quite different from having different rates varying in accordance with one's preferences, as is possible with private insurance. We construct a political economy model in order to characterize the political equilibrium and answer questions like: "Under what conditions is there a conflict in society on what coinsurance rate should be set?" and "Which groups of individuals will vote for a higher and lower than equilibrium coinsurance rate, respectively?".

We also extend our basic model and allow people to supplement the coverage provided by the government with private insurance. Then, we answer two questions: "Who will buy the additional coverage?" and "How do the coinsurance rates people are now faced with compare with the rates chosen with pure private provision?".
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1. Introduction

No matter what system for the provision of health care—private or public—for which a country has opted, the consumer only pays a small part of the total cost out-of-pocket upon consumption. While insurance premiums pay for the bulk of the cost in a private system, tax receipts are used if provision is public. But irrespective of how health care is financed, we must deal with the fact that once people have fallen ill, they face incentives to consume more than optimal health care, since they do not have to pay the full marginal cost for the care they utilize. In the health economics literature, this is referred to as moral hazard (Pauly, 1968), or sometimes as ex post moral hazard (Zweifel and Breyer, 1997) to stress the fact that it arises after the bad state has occurred—as opposed to ordinary moral hazard which is a change in behavior before the actual accident. The problem of ex post moral hazard has attracted considerable attention in conjunction with private health insurance.[1]

The usual way of mitigating moral hazard is to require patients to pay some part of the costs out-of-pocket, i.e. to include a coinsurance in the insurance contract. The larger the part paid out-of-pocket (the higher the coinsurance rate), the lower is the excess utilization of medical care. On the other hand, the higher is the coinsurance rate, the lower is the risk reduction. So, there is an inherent conflict between reducing excess utilization and reducing risk when deciding on the coinsurance rate. It is in the interest of the buyer of insurance to reduce overconsumption, since the premium will depend on the expected costs for the buyer's medical care. The optimal coinsurance rate makes an ideal trade-off between minimizing deadweight losses and reducing risk.

Not everybody will want the same coinsurance rate, since people differ in how they want to strike this balance. With private health insurance, the market can offer buyers different contracts, so that people preferring a lower coinsurance must pay higher premiums. This is generally not the case when health insurance is fully tax-funded. Then, people cannot choose how much to pay and get a coinsurance in accordance with their contribution; instead one contract applies to everyone.

It is quite different to have a uniform coinsurance rate determined in a political process, than different rates varying in accordance with one's preferences. It will, for instance, have different consequences for efficiency and distribution.

Our objective is to construct a political economy model in order to characterize the political equilibrium and answer questions like: "Under what conditions is there a conflict in society on what coinsurance rate should be set?" and "Which groups of individuals will vote for a higher and lower than equilibrium coinsurance rate, respectively?" It turns out that income elasticity and risk aversion are the two crucial parameters. For instance, if we have the empirically plausible situation of an income elasticity of health services smaller than one and constant relative risk aversion, low-income individuals will prefer a lower coinsurance than high-income individuals.

First we study these issues under the assumption that public insurance cannot be supplemented with private insurance. However, a strong case can be made for supplementation usually being possible (Besley and Gouveia, 1994; Breyer, 1995; Gouveia, 1997), at least

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[1] In Feldstein (1973) and Feldman and Dowd (1991), it is shown that this is not just a problem of theoretical interest, but also of substantial empirical relevance.