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Welfare costs of reclassification risk in the health insurance market

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ABSTRACT

We assess the quantitative importance of reclassification risk in the US health insurance market. Reclassification risk arises because the health conditions of individuals evolve over time, while a typical health insurance contract only lasts for one year. Thus, a change in the health status can lead to a significant change in the health insurance premium. We measure welfare gains from introducing explicit insurance against this risk in the form of guaranteed renewable health insurance contracts. We find that in the current institutional environment individuals are well-sheltered against reclassification risk and they only moderately gain from having access to these contracts. More specifically, we show that employer-sponsored health insurance and public means-tested transfers play an important role in providing implicit insurance against reclassification risk. If these institutions are removed, the average welfare gains from having access to guaranteed renewable contracts exceed 4% of the annual consumption.

1. Introduction

An important feature of the health insurance market is that a typical insurance policy only lasts for one year while a disease can last for any period of time. This creates the problem of reclassification risk – a risk to face a drastic increase in health premiums when one's health condition deteriorates. The fact that standard health insurance contracts leave individuals exposed to reclassification risk is considered an important market failure in the health insurance market (Hendel and Lizzeri, 2003; Diamond, 1992). Moreover, the observation that sick people face high health insurance premiums was an important argument for an additional regulation on health insurance market during the 2009–2010 health reform debate.[1] The aim of this paper is to evaluate how important is the lack of protection against reclassification risk for the welfare of consumers.

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[1] This debate resulted in the major health reform bill that was signed in 2010. Among other things, this bill forbids insurance companies to risk-adjust premiums in the individual market. This can be considered as a regulatory way to remove reclassification risk. We discuss implications of our results for the health reform in Section 6.

One way to do this is to compare the current system with the first best solution to the problem of reclassification risk which is to enroll everyone into a long-term health insurance contract. The price of such contract depends on the average expected medical expenses of all participants. In other words, healthy people make transfers to the sick equalizing the insurance price for all risk categories. This contract requires consumers' commitment because healthy individuals tend to drop out. As shown by Cochrane (1995), the lack of commitment can be overcome by introducing a special arrangement such as illiquid accounts.[2] Another problem with ensuring participation in this contract is the incomplete labor markets. Since premiums are based on the average medical expenses but not on individual income, consumers experiencing a sequence of bad income shocks may be unable to pay the premium. This can be solved by introducing income-based transfers. However, since all income redistributive measures have a non-trivial effect on welfare, it is hard to measure pure welfare effects of reclassification risk in the presence of these transfers.

To overcome this problem, we consider a special type of contracts that can provide insurance against reclassification risk without requiring consumers' commitment, income-based transfers or any other special arrangements. These are guaranteed renewable contracts discussed in detail by Pauly et al. (1995). These contracts are front-loaded: a consumer is required to prepay part of his future premiums and this prepayment locks him into the contract.[3] In return, a consumer is guaranteed that (i) he will be able to renew his health insurance contract in the future; and (ii) the prespecified renewal price will be independent of his future health realization. A key feature of this type of contracts is that reclassification risk is insured not by making healthy people pay for the sick but by allowing individuals to make state-contingent savings that pay off when their premiums increase.[4] To evaluate the welfare costs of reclassification risk, we consider how much welfare improvement can be achieved from introducing guaranteed renewable contracts into the individual health insurance market.[5]

We construct a general equilibrium overlapping generations model where people face uninsurable labor income risk and medical expense risk that can be partially insured. Several types of health insurance are available. First, some individuals have access to employer-based insurance. Second, low-income individuals can get Medicaid. Finally, all individuals can buy insurance policy directly in the individual market where premiums are risk-rated, i.e. depend on the current health conditions of individuals. All policies last for one year while medical shocks are persistent, which creates the problem of reclassification risk.

Our model reflects two institutional features that are essential when evaluating the importance of reclassification risk in the U.S. health insurance market. First, a large proportion of non-elderly adults buys their insurance from the employer-based market. This market is community rated, i.e. premiums are independent of the health conditions of individuals. People with permanent access to this market are protected from the risk of premium fluctuations. Also, low-income individuals can get public insurance from Medicaid for free. Second, for people facing high medical shocks and/or bad labor income shocks, the government provides protection in the form of the consumption minimum floor which can also mitigate the consequences of the lack of explicit insurance against reclassification risk.

We calibrate the model using the Medical Expenditure Panel Survey dataset to match the key insurance statistics for the U.S. Using the calibrated model we study the quantitative implications of introducing frictionless guaranteed renewable contracts into the individual market.

We find that comparing to the situation when only standard short-term insurance contracts are available, the introduction of guaranteed renewable contracts can noticeably decrease uninsurance rates – from 25.9% to 19.4% due to higher participation in the individual insurance market. Also, when both standard and guaranteed renewable contracts are available, most of the consumers prefer to buy the latter type. Our results show that people who hold guaranteed renewable contracts face almost no fluctuations in their health insurance premiums even if their health deteriorates. This implies that these contracts provide good protection against reclassification risk.

In terms of welfare, we find that the introduction of guaranteed renewable contracts brings small average welfare gains (0.07% of the annual consumption) because in the current U.S. institutional environment people are well-sheltered against reclassification risk. More specifically, we show that several institutions provide good implicit insurance against reclassification risk. First, employer-sponsored health insurance, which protects mostly high-income people; and second, the consumption minimum floor, which protects mostly people with low income. If these institutions are removed, the average welfare gains from having access to guaranteed renewable contracts exceed 4% of the annual consumption.

This paper belongs to two strands of literature. First is the literature studying how private markets can provide insurance against reclassification risk if buyers cannot commit to a contract. A seminal paper in this area is Cochrane (1995) who characterizes a set of contracts that can provide long-term health insurance in such an environment. His insight is to combine

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[2] More specifically, Cochrane's idea is to substitute a long-term contract with a sequence of short-term contracts that require consumers who turn out to be healthy to make transfers to insurance firms. Illiquid accounts are needed to enforce these transfers.

[3] Hendel and Lizzeri (2003) show that front-loaded contracts are optimal in the absence of consumers' commitment.

[4] It is important to point out the fundamental difference between these guaranteed renewable contracts and the regulatory guaranteed renewability provision that exists in some states of the US. The guaranteed renewability provision forbids insurance companies from denying coverage to individuals who already have an insurance contract and want to renew it. However, this provision does not require that the price at renewal is fixed at some prespecified level. In contrast, the key feature of guaranteed renewable contracts is that they allow to predetermine renewal price in advance.

[5] More specifically, in order to measure welfare costs of reclassification risk we introduce a frictionless market offering guaranteed renewable contracts. An alternative modeling strategy is to allow this market to exist in the baseline economy but with frictions that prevent people from using it. Then we can quantify how large are these frictions. Our results are robust to this alternative modeling strategy. In the Appendix we show that relatively small fixed costs are sufficient to deter people from buying guaranteed renewable contracts, which possibly explains why we do not observe these contracts offered in reality.