

Existence and Efficiency of Nash Equilibria in Insurance Markets with Adverse Selection

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Abstract

We consider insurance markets with adverse selection and propose a mechanism under which a separating Nash equilibrium always exists (even when a Rothschild-Stiglitz equilibrium does not). This equilibrium is unique and always (interim) incentive efficient. In our setting, the Rothschild-Stiglitz equilibrium exists and coincides with ours only if the former is incentive efficient. Otherwise, our equilibrium involves cross-subsidization across types of insurees. We show that both the non-existence problem and the inefficiency of the equilibrium in Rothschild-Stiglitz are due to arbitrary restrictions imposed on insurers (they are not due to the informational frictions of the economy). In particular, the non-existence problem arises because the insurers are (exogenously) committed to the contracts they offer and the inefficiency comes from the assumption that insurers can offer only one contract. In the context of our mechanism, both the number of (menus of) contracts offered and to which contracts the insurers are committed are endogenously determined.

Our mechanism exhibits two key features. First, a three-stage game in which insurers may withdraw menus of contracts in the third stage. Second, insurers may offer menus of contracts that provide their buyers with the right to choose any (but only one) of the contracts included in the menu. That is, if such a menu is offered, the insurer may withdraw the menu but not individual contracts from within the menu. Although insurers may also offer menus from which they can withdraw individual contracts, if the equilibrium involves cross-subsidization across types, only the latter menu of contracts is offered in equilibrium.