Adverse Selection and Repeated Insurance Contracts : a Comment

by J. Hofmann *

In Volume 8, No. 29 of this journal G. Dionne demonstrated that misallocation of resources explained by asymmetrical information between the insured and the insurer can be eliminated with a "no claim discount strategy". The idea is that insurance premium of each period depends on the average loss claimed by the insured in the past. The insured has to declare the risk he represents. If the average loss is greater than the reasonable average loss corresponding to his declaration, he has to pay a higher premium. If the difference between the premium with reasonable average loss and the premium with "unreasonable" average loss is high enough, the insured will be punished if his declaration is wrong, and he will declare his true risk class.

This "no claim discount strategy" may be used in order to realize full insurance coverage and to eliminate *this* special form of inefficiency due to asymmetrical information. But it does not eliminate inefficiency at all. It is not possible to motivate the insured to declare the true class of risk without cost.

The costs of motivating the insured to declare the true risk are the costs of uncertainty to be punished. The premium of period $t + 1$ is defined by the formula (p. 323)

$$F^{t+1}(\theta_i^t) = \begin{cases} P_* \text{ if } \zeta < \bar{D}(\ast) + \alpha^{N(t)} \\ P_K \text{ otherwise} \end{cases}$$

where ζ is the average loss claimed by the insured in the first t periods, $\bar{D}(\ast)$ is the true average loss corresponding to the declaration of risk done in the first period and $\alpha^{N(t)}$ is a statistical margin of error. If $(F^1, F^2, \dots)$ is the strategy of the insurer and $P_* \neq P_K$, each F^t is a random variable for the insured given his declaration of class of risk. The probability that $F^t = P_K$ is not zero for all t . Also, there is a secondary risk situation. Since the insured is risk-averse, a constant premium is preferable to a variable premium. Due to asymmetric information the insured can not insure the risk of the variation of premium. The premium can be p_K because he is punished although he declared the true risk class. The welfare loss of his new risk situation can be interpreted as the remaining costs of adverse selection, and also it is not true that the "no claim discount strategy may be used to eliminate inefficiency due to adverse selection" (p. 327) totally.

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Optimizing P_* , P_K and α can reduce the costs of asymmetrical information, but the costs will never be zero.

REFERENCE:

DIONNE, G. [1983]: Adverse Selection and Repeated Insurance Contracts. The Geneva Papers on Risk and Insurance, 23, S. 316-332.