

論文の内容の要旨

論文題目

Institution Design, Economic Dynamics and Incomplete Information

(和訳 制度設計、経済動学及び不完備情報)

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This thesis provides theoretical analyses on matters of institution design in economic dynamics with incomplete information.

Chapter 2 considers when and how “simple” contracts can be optimal in dynamic principal-agent relationships. In designing long-term contract, the principal may find it optimal to make the reward schedule depending on the entire history of agent’s past performances, since every each of those performances appears to be very informative about how the agent has made appropriate efforts during the relationship.

However, it is sometimes observed that the reward to the agent depends only on the final outcome. For example, a student’s grade in a course quite often depends only on the final exam score, where the performance in the problem sets and the mid-term exam is ignored. The analysis in Chapter 2 shows that such an arrangement can be optimal if the agent’s effort in each period has strong persistent effects. It is shown that the optimality of such a simple payment scheme crucially depends on the first order stochastic dominance of the final outcome under various effort sequences.

Study in Chapter 3 sheds light on the design of whole-sale flower markets in Japan. Flower markets are known for the use of descending-auction rule (“Dutch”

auction). Japanese markets have also adopted the descending-auction in principle, with a unique modification called "mari" in the market jargon. The principle of "mari" is to allow buyers to apply for purchasing (some part of) the remainder of flowers at the executed price in the previous auction. As it may happen that the number of applicants to "mari" exceeds the number of unsold flowers in which case the flowers are modelled to be randomly allocated, we expect that a certain amount of inefficiency is caused by the use of "mari" rule. On the other hand, "mari" can be seen to contribute for the economy of time: if applications to "mari" rush in, certain amounts of the remainder of flowers are sold off at one time, which would consequently reduce the total number of auctions to be held at the market. The main result of the analysis in Chapter 3 is that the "mari" rule is *reasonable*: we see from the equilibrium analysis that the loss of efficiency tends to be zero while the number of auctions to be held tends to be one, as the market size increases to infinity.

In Chapter 4 we investigate the value of bicameralism. In changing a nation's fundamental policy from one to another, bicameral system generally requires *both* chambers to approve the new policy, and if *either* of the chambers disapproves it then the nation is to stick to *status quo* policy. Such stickiness of bicameral legislature encounters an interesting situation if the two chambers are elected in different years (as in many of modern bicameral nations including Japan). In such cases it could happen that "the public opinion of last year" rejects "the public opinion of this year", and therefore the government is forced to stick to the *status quo* policy that appears to lack the current popular support. The analysis in Chapter 4 indicates that bicameralism can be more favourable in the sense that such stickiness contributes to apply the brakes to the failure of current public opinion in the long run.