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Bargaining, Arbitration, Mediation **(2775)**
Final exam, winter term 2007/08

Please solve all of the following questions. The number of credits (indicated in **bold** figures) assigned to each part reflects the time you have for answering it. The total is 120. The use of pocket-calculators, textbooks, lecture-notes, or dictionaries is neither necessary nor permitted.

1. (50 credits) Players A and B bargain about dividing 1000 Euros. The discount rate (per bargaining round) of player $i \in \{A; B\}$ is δ_i, with $0.5 < \delta_i < 1$. After the last rejection of the respective game, player i receives T_i Euros, with $T_i \geq 0, T_A + T_B < 1000$. You may employ the "niceness" assumption.

a) Assume that Player A may submit an ultimatum demand, denoted as x_1. Solve for the Subgame Perfect Equilibrium (SPE) demand of player A. **(4)**

b) Discuss the result obtained in a) in the light of experimental results. **(6)**

c) Now assume that B, if he rejects A's initial demand, may submit a counter-demand (denoted as x_2). Derive the SPE demands of players A and B. **(12)**

d) Explain why the result in c) only depends on T_A and not on T_B. **(4)**

e) Derive the two players' equilibrium payoffs, and derive the condition under which player A has a first-mover advantage. *Hint: put all discount rates to one side of the inequality, and all Euro amounts to the other side.* **(8)**

d) Now assume that the parties may continue bargaining for an infinite number of rounds. Explain why you cannot apply backwards induction directly, and outline a solution strategy for the derivation of a SPE. **(6)**

e) Derive the initial SPE demand of player A in the infinite game.**(6)**

f) Show the condition under which A enjoys a first-mover advantage in the infinite game. **(4)**

2. (25 credits) The Easter vacation season on the remote island Capabulco lasts 2 weeks. The Abalaone Hotel (A) is able to yield weekly returns of 1 Million Euros during the season (and then has to close down again until next year). The day before the season starts, however, the workers union (U), representing all of the 500 workers, announces a strike. Without workers, the hotels weekly returns drop to zero (we neglect here potential law suits of angry customers). Bargaining takes place with one alternating offer per week, where U may begin. What outcome do you predict, and what is the likely outcome if the season lasts just 1 week? *(Hint: You may neglect discounting here).*

3. (45 credits) Explain, using an adequate game-theoretic model, why Bad Debt Loss Insurance for

a) trial awards may increase settlement outcomes **(20)**,

b) whereas insuring settlement results may decrease settlement outcomes **(15)**.

c) Explain the economic intuition behind this comparison and the likely institutional consequences for insurance markets. **(10)**

Good luck!