

Multi-Agent Bilateral Bargaining with Endogenous Protocol

Sang-Chul Suh and Quan Wen

Speaker: Quan Wen

e-mail: quan.wen@vanderbilt.edu

Vanderbilt University, Department of Economics

U.S.A.

KeyWords: Multilateral bargaining, subgame perfect equilibrium

ABSTRACT

Consider a multilateral bargaining problem where negotiation is conducted by a sequence of bilateral bargaining sessions. We are interested in an environment where bargaining protocols are determined endogenously. During each bilateral bargaining session of Rubinstein (1982), two players negotiate to determine who leaves the bargaining and with how much. A player may either make an offer to his opponent who would then leave the game or demand to leave the game himself. Players' final distribution of the pie and a bargaining protocol constitute an equilibrium outcome. When discounting is not too high, we find multiple subgame perfect equilibrium outcomes, including inefficient ones. As the number of players increases, both the set of discount factors that support multiple equilibrium outcomes and the set of the first proposing player's equilibrium shares are enlarged. The inefficiency in equilibrium remains even as the discount factor goes to one.