

A Fishery Regulation Model: Bargaining over Fishing Pressure

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Abstract : The Diamond-Mortensen-Pissarides model widely used in labor economics is tailored to fishery. By this way, a fishing function is defined to depict the fishing technology, and Bellman equations are established to describe the behaviors of fishermen and conservationists. On this basis, a negotiation takes place as a Nash-bargaining over the upper limit of the fishing pressure between both political representative groups of fishermen and conservationists. The existence and uniqueness conditions of the Nash-bargained fishing pressure are established. Given the biomass evolution equation, the dynamics of the model variables (fishing pressure, biomass, fish need) is studied.

Keywords : conservation, fishery, fishing, Nash bargaining

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