

Resource extraction activity: an intergenerational approach

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Abstract

In this paper we study a differential game, for resource extraction of a renewable good, in which players are overlapping generations of extractors. The framework of overlapping generation allows us to consider intragenerational (players in the same generation) and intergenerational (players in different generations) game equilibrium. We consider the case in which old extractors face lower costs than young competitors and this will result in an advantage in strategies for old generation which compensate partially the reduced marginal resource rent. Since we consider overlapping generations, players have asynchronous horizons, in contrast with a number of studies in intertemporal exploitation of resources in which players have identical time horizons. We obtain the values function and strategies for extractors both for young generation and for old generations.

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