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MARKOV PERFECT EQUILIBRIA IN OLG MODELS WITH RISK SENSITIVE AGENTS

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Abstract. In this paper, we present an overlapping generation model (OLG for short) of resource extraction with a random production function and an altruism having both paternalistic and non-paternalistic features. All generations are risk sensitive with a constant coefficient of absolute risk aversion. The preferences are represented by a possibly dynamic inconsistent dynamic recursive utility function with non-cooperating generations. Under general conditions on the aggregator and transition probability, we examine the existence and the uniqueness of a recursive utility function and the existence of a stationary mixed Markov Perfect Nash Equilibria.

1. Introduction

Over fifty years ago Phelps and Pollak [44] postulated a model of optimal economic growth without Ramsey assumption of perfect altruism of generations which we now call *overlapping generations model* (OLG for short). From a game-theoretic point of view the OLG model is an infinite horizon dynamic game with countably many identical short-lived players. The player represents a generation which lives for one period. Each generation derives utility from its own consumption and all successors. Arrow [4] and Dasgupta [19] quickly took over this

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