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On a nonstationary discrete time infinite horizon growth model with uncertainty

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Abstract: In this paper we examine a nonstationary discrete time, infinite horizon growth model with uncertainty. Under very general hypotheses on the data of the model, we establish the existence of an optimal program and we show that the values of the finite horizon problems tend to that of the infinite horizon as the end of the planning period approaches infinity. Finally we derive a transversality condition for optimality which does not involve dual variables (prices).

Keywords: growth model, discrete time, infinite horizon, finite horizon, uncertainty, utility function, technology multifunction, optimal program, transversality condition

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