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**OPTIMAL GROWTH MODELS WITH BOUNDED OR
UNBOUNDED RETURNS: A UNIFYING APPROACH**

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Abstract

In this paper we propose a unifying approach to study optimal growth models with bounded or unbounded returns (above/below). We prove existence of optimal solutions. We prove also, without using contraction method, that the Value function is the unique solution to the Bellman equation in some classes of functions. The value function can be obtained by the usual algorithm defined by the operator provided by the Bellman equation. The well-known results, and those in Alvarez and Stokey (1998) can be obtained from this paper.

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