

Comments and Discussions

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It is a standard practice to assume a constant discount rate in intertemporal optimization models. However, economists also recognize that it is an assumption of convenience. Can we relax this assumption without losing major and important results that we have cherished? Professor Chang shows that we can retain all nice results of a one-sector optimal growth model even if the preference structure exhibits decreasing marginal impatience. It is accomplished by replacing the constant discount rate assumption with a convex discount function whose first derivatives are uniformly bounded. It does not sound like a stringent condition at all.

This finding has a very interesting implication. As Professor Chang showed in his 1994 paper that the constant discount rate can be replaced by a preference structure that exhibits increasing marginal impatience. The implication of these two papers is, at least for one-sector growth model, that there is no excuse for economists to use the assumption of a constant discount rate any longer.

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