Feedback solutions to dynamic models of optimal taxation

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Abstract

The problem of dynamic optimal taxation is one of the important issues in macroeconomics and public finance theory. In their influential studies Chamley [1] and Judd [2] establish that the optimal tax on capital income should be zero in the long run. This somewhat surprising result has been derived as an open-loop Stackelberg solution of a dynamic game using necessary conditions for optimality.

In this paper we show that the optimal capital tax can be different from zero whenever the solution of the dynamic taxation problem is considered in the class of state-feedback controls. Under suitable assumptions we also show that the feedback Nash equilibria for the models proposed by Chamley and Judd can be computed explicitly. The same approach can be applied to a slightly generalized version of the model considered in [3]. Finally, we present some illustrative examples.

References

