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The supermodularity of the tax competition game. (English) Zbl 1417.91377
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Summary: Tax competition is often associated with the “race to the bottom”: a decrease in the tax rate of one jurisdiction (country, region or municipality) triggers similar reactions in neighboring jurisdictions. This race can be related to two properties of the tax competition game: positive tax spillovers and the strategic complementarity of tax rates. Using tools from generalized concavity, more precisely r -concavity, and supermodular games, this paper offers a simple yet unifying perspective on the fundamental forces that shape tax competition. The main results characterize sufficient conditions on the marginal productivity of tax competing jurisdictions to predict a “race to the bottom”. These conditions bind the curvature of the demand for capital of each tax-competing jurisdiction. Quadratic production function respects these, while Cobb-Douglas form requires an additional condition. We deduce several results: at least one pure-strategy Nash equilibrium exists and is unique. Going beyond our specific framework, we apply some results of supermodular games with positive spillovers: in case of multiple equilibriums, tax coordination is Pareto improving; but the coalition of a subgroup of countries does not achieve neither tax coordination, nor tax cooperation. Establishing similar sufficient conditions for the supermodularity of the tax competition game with welfare maximizers raises multiple issues. Besides the question of the nature of public spending, we discuss the role of capital by considering an elastic worldwide stock of capital, capital ownership, and offshore centers.

MSC:

[91B64](#) Macroeconomic theory (monetary models, models of taxation)
[91A10](#) Noncooperative games

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