A Growth Model with Corruption in Public Procurement: Equilibria and Policy Implications

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Abstract

We study the relationship between corruption in public procurement and economic growth, within the Solow framework in discrete time, while assuming that the public good is an input in the productive process and that the State fixes a monitoring level on corruption depending on the tax revenues. The resulting model is a two-dimensional, continuous and piecewise smooth map describing the evolution of the capital per capita and that of the corruption level. We study model from the analytical point of view: we determine its fixed points, we study their local stability and, finally, we find conditions on parameters such that multiple equilibria co-exist. We also present numerical simulations useful to explain the role of parameters in the long–run path of the model and to analyze the structure of the basins of attraction when multiple equilibria emerge. Our study aims at demonstrating that stable equilibria with positive corruption may exist (according to empirical evidence), even though the State may reduce corruption by increasing the wage of the bureaucrat or by increasing the amount of tax revenues used to monitor corruption.

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