Contributing to public defense in a contest model

Gautam Bose[*1]

[1]University of New South Wales (UNSW) – School of Economics UNSW High St ; Kensington, NSW 2052, Australia

Abstract

I augment the standard Tullock contest by adding a first stage in which each of the potential contestants has the option of contributing some resources to a public defender or "government". In the subsequent subgame, if one of the contestants attacks the other, then the government contributes its resources to the defence of the agent that is attacked. I show that, if the resource distribution is not "too unequal", agents make positive contributions to government in equilibrium and there is no fighting. The deterrence equilibria are pareto superior to the corresponding equilibria of the pure Tullock contest. The Rawlsian criterion yields the most efficient equilibrium for each given resource distribution, hence progressive taxation is efficient in this model. Finally, for a range of very unequal resource distributions, the equilibrium size of government is too large.

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[*]Speaker