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The core in the presence of externalities

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Abstract

We generalise the coalition structure core to games in partition function form. In our definition we make only one assumption, namely that there is some internal consistency in the game: Residuals of the deviation play a game similar to the initial one, and come to a residual core outcome – whenever this is possible. Deviating players form their optimistic or pessimistic expectations with this in mind. This leads to a recursive definition of the core. When compared to existing approaches, our core concept shows a reduced sensitivity to behavioural assumptions. We look at the core of an economy with a common pool resource defined by Funaki and Yamato (1999) and find that for a number of numerical examples our core concept resolves the contradiction, which arose when more naive approaches were used. Possibilities for further extensions are outlined.

Completed draft available on request from:

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