

# Coalitional properness

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## Abstract

In the classic model of a large scale economy agents or consumers are considered as *price takers*. This is represented, according to Aumann's intuition, as a non-atomic measure space of agents that exchange goods in a finitely-dimensional commodity space. In these models the coincidence between cooperative and non cooperative equilibria (*core-walras equivalence*) is proven via two main tools: the Lyapounoff Theorem and an application of the Separation Theorem. More modern lines of investigation try to extend this model in two main directions: on one side the need to represent infinite time horizon economies requires the use of infinite-dimensional commodity spaces; on the other side, to overcome the artificial bound on the formation of coalitions that countable additivity imposes, some authors proposed a finitely additive framework, where a coalitional instead of an individualistic approach proves to be the more suitable to adopt.

In both situation however the lack of the Lyapounoff Theorem requires further assumptions. In particular, in the combination of both extension, i.e. finitely additive economies with infinite dimensional commodity space, the core-walras equivalence result is usually proven under the assumption that the commodity space is a vector space ordered by a cone having non-empty interior: a condition that cancels most of the spaces of interest in applications, such as, for example,  $L^p$ -spaces,  $1 \leq p < \infty$ .

On the other side, the literature devoted to countably additive individualistic economies with an infinite dimensional commodity space, usually replaces the lack of interior points of the order-cone, by substituting it with a different one; this is the key idea of the assumption of *properness* (or equivalently *extremely desirable commodity*) as proposed by Rustichini and Yannelis.

In my talk I will present two recent papers that follow the same scheme of ideas; more precisely they propose a form of *coalitional properness*, as an alternative to the requirement on the interior of the order-cone, which proves to be the suitable one for coalitional finitely additive economies on an infinite commodity space enjoying the RNP; thus we retrieve many of those important spaces (indeed all, but  $L^1$ -spaces).

The first paper, written jointly with Francesca Centrone, is dedicated to the classic core-equivalence in these types of economies. In the second one, written jointly with Anujii Bhowmik and Francesca Centrone, we approach under the same point of view the more recent developments of these topics, that is economies with asymmetric information, in both individualistic and coalitional approaches.