

The authors consider an exchange economy $\mathcal{E} = \{(\Omega, \mathcal{F}; (T, \Sigma, \mu); X; (\mathcal{F}_t, q_t, \mu_t, e_t)_{t \in T})\}$. The economy is supposed to have two time periods, a finite set Ω of states of nature, a field \mathcal{F} of events, and a complete measure space of agents (T, Σ, μ) which may be atomic. Here, T denotes the set of agents and Σ is the σ -field of possible coalitions whose economic weight on the market is given by the measure μ . In the second period consumption takes place. The commodity space \mathbb{B} is an ordered separable Banach space whose positive cone \mathbb{B}_+ admits an interior point. The function $X : T \rightarrow \mathbb{B}_+$ is the consumption set correspondence in each state of nature. Every trader $t \in T$ is characterized by a state-dependent utility function $u_t : \Omega \times \mathbb{B} \rightarrow \mathbb{R}$, a random initial endowment $e : T \times \Omega \rightarrow \mathbb{B}_+$, a private information partition \mathcal{F}_t on Ω and a prior q_t on Ω denoting the prior beliefs of the agent. The initial endowment should satisfy that $e(t, \omega) \in X(t)$ for all $t \in T$ and $\omega \in \Omega$. Moreover, the function $e(\cdot, \omega)$ is assumed to be μ -integrable in each state $\omega \in \Omega$, while $e(t, \cdot)$ is \mathcal{F}_t -measurable.

A Radner competitive equilibrium can be defined by having agents maximize their ex-ante expected utility subject to their budget constraints in which informational constraints are considered as well. A feasible trade of an agent must be feasible with respect to the σ -algebra generated by his information partition \mathcal{F}_t . The Radner competitive equilibrium is an ex-ante concept in which agents who are better informed are in general better off.

In a cooperative game theory approach to the situation above, agents have the option to arrange state-dependent contracts before the state of nature ω has realized. In general, a feasible trade of an agent must be measurable with respect to the σ -algebra generated by his information partition. Which contracts are feasible therefore depends on the exchange of information that takes place. The paper considers the private core as introduced in Yannelis (1991) in which no form of information sharing is assumed, so coalitional bargaining takes place exclusively on the basis of private information. The private core consists of all feasible private allocations which are not privately blocked by a coalition.

In Einy, Moreno and Shitovitz (2001) it has been shown that there is an equivalence between the private core and Radner equilibrium allocations under standard assumptions. The authors generalize the set-up of Einy et al. in two respects: they consider a measure space of agents (T, Σ, μ) which may have atoms and they consider infinite dimensional commodity spaces. In particular, they consider ordered separable Banach spaces whose positive cone admits interior points.

The authors consider the notion of the Aubin private core, a mixture of

the core concept of Aubin with different rates of participation in a coalition and the private core, resulting in so-called fuzzy coalitions. In the Aubin private core traders in a blocking coalition do not share their own private information and have the opportunity to have different rates of participation in a coalition. The Aubin private core is the set of all feasible private coalitions which are not privately blocked by a fuzzy coalition. The authors prove that under standard assumptions the set of Radner equilibrium allocations is equivalent to the Aubin private core.

The set of Edgeworth private equilibria is a concept derived from the Debreu-Scarff approach of replica economies. In general it is (trivially) a superset of the Aubin private core. Under the assumptions of the paper, the Aubin private core is shown to be equivalent to Edgeworth private equilibria.

An allocation is privately dominated if it is privately blocked by the whole coalition of agents. It is shown that it is possible to characterize the Aubin private core as privately non-dominated allocations in suitably associated economies. This characterization enables the authors to derive the validity of the welfare theorems in the general framework of the paper.

Einy, E., D. Moreno, and B. Shitovitz (2001), "Competitive and Core Allocations in Large Economies with Differential Information," *Economic Theory*, 18, 321–332.

Yannelis (1991), "The Core of an Economy with Differential Information," *Economic Theory*, 101, 189–221.