Walrasian and value allocations under ambiguity in coalitional dependent large economies with differential information

ABSTRACT: In the presence of a countable number of states, an uncountable number of agents (who are, nevertheless, divided into finitely many types) and ambiguity (which is been dealt with agents' maximin preferences), we introduce the idea of coalitional dependent economies with asymmetric information. These are generalized exchange economies, as types' differential characteristics are parametrized with respect to their coalition membership. For such economies, we end up defining (without private information measurability requirements) Walrasian and Shapley value equilibria, which include the (Bayesian) Radner (*Econometrica*, 1968) and Krasa-Yannelis (*Econometrica*, 1994) equilibria as a special case. We prove existence of these notions under standard assumptions. We conceptualize two new definitions of coalitional dependent (Pareto type) efficiency, which reduce to the standard Pareto optimality when the economy is coalitional independent. Contrary to the Bayesian case, there is a sustainable loss of efficiency, even though the idea of incentive compatibility we demand for is stricter. Indeed, with scarce private information measurability requirements on types' endowments solely, we prove that efficient Walrasian and value allocations are incentive compatible in the strong sense of Angelopoulos-Koutsougeras (*Econ Theory*, 2014). We finally prove equivalence between competitive and value equilibria in coalitional independent and dependent economies, extending in the latter case the result of Einy-Shitovitz (*Games and Econ Behavior*, 2001) in three directions: the economy is coalitional dependent (hence, types' information is arbitrarily private), types are non-Bayesian and the state space is non-finite (thus, the commodity space is infinite dimensional).

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