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Pareto Optimality and Existence of Quasi-Equilibrium in Exchange Economies with an Indefinite Future

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Abstract

We study the attainability of Pareto optimal allocations and existence of quasi-equilibrium in exchange economies where agents have utility functions that value consumption in an indefinite future. These utility functions allow for fairly general discounting of consumption over finite time horizons, but add a utility weight to the bulk of the consumption sequence, which we identify with the indefinite future. As our commodity space we use the space of all convergent sequences with the limit of the sequence representing consumption in the indefinite future. We derive a necessary and sufficient condition for the attainability of the Pareto optimal allocations. This condition implies that efficiency can only be attained if consumers' valuations of time are very similar. Our proof relies on the existence of an interior solution to certain infinite dimensional optimization problems. If the condition is not met, no interior quasi-equilibria exist. We extend the model to include consumers with Rawlsian-like maximin utility.

Keywords: Infinite horizon exchange economy, Pareto optimality, non-discounting preferences
JEL classification: D51

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