Local Independence Condition and Axiomatic Characterization of Price-Money Message Mechanism

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Abstract

To characterize money in static economic model, it is known to be important to consider the agent-commodity double infinity settings, i.e., the overlapping-generations framework. There does not seem to exist any papers, however, treating the axiomatic characterization problems for such monetary Walras allocations under the social choice and/or mechanism design settings. We show that the monetary Walras allocation for the economy with double infinities is characterized through the *weak Pareto optimality*, *individual rationality*, and a weak version of the *local independence* condition of the *social choice correspondence* among the *message mechanisms* under the *category theoretic* approach in Sonnenschein (1974). We utilize Sonnenschein's market extension axiom for *swamped* economies that is closely related to the *replica stability* axiom of Thomson (1988). We can see how these conditions characterize the price-money message mechanism *universally* among a wide class of mechanisms, and *efficiently* in the sense that it has the minimal message space.

KEYWORDS : Message Mechanism, Social Choice Correspondence, Overlapping-Generations Economy, Monetary Walras Allocation, Local Independence, Informational Efficiency, Universal Mapping Property

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