Zbigniew Świtalski
University of Zielona Góra
Faculty of Mathematics, Computer Science and Econometrics

Stability and competitive price equilibria in a Gale-Shapley market model

We construct a simple market model of Gale-Shapley type ([1], [2]) for which we show that a matching u is stable (i.e. belongs to the core) if and only if it is a competitive equilibrium allocation. Our result is a kind of a response to the pessimistic view of Shapley and Scarf concerning the problem of introducing the concept of market equilibrium in the GS model [3, p. 35]. The relationship we show resembles a result for the simplest version of Shapley-Shubik model (called the "assignment game" [4]) which can be very roughly formulated as follows: "*The assignment u is optimal if and only if it is a competitive equilibrium allocation*" (see [4] and [5], p. 31). The main difference between our model and the SS model is that in our model the buyers' preferences are independent on prices (and in the SS models they depend on prices and hence the definition of equilibrium is quite different).

References

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