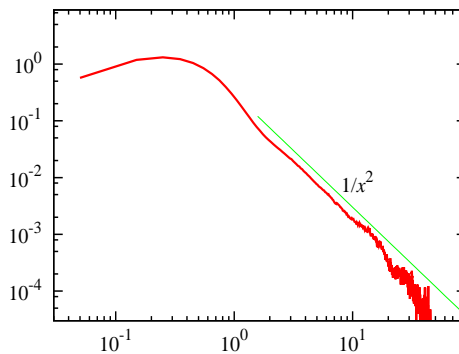


KINETIC MODELS OF IMMEDIATE EXCHANGE

Marco Patriarca (marco.patriarca@kbfi.ee)

National Institute of Chemical Physics and Biophysics, Tallinn, Estonia

Kinetic wealth exchange models are minimal models of economy where the state of each agent is specified by a wealth variable and agents exchange wealth according to a conservative stochastic update rule [1]. Here some generalizations are studied [2]. First, the basic dynamics is modified to represent immediate wealth exchanges rather than reshufflings or uni-directional movements of wealth. The corresponding equilibrium wealth distributions describe better the small-wealth range. Furthermore, a microscopic probabilistic acceptance criterion is introduced so that two agents trade depending on their profit. It is found that for a large class of criteria the equilibrium wealth distribution is unaffected by the form of the criterion. The heterogeneous version with moderate heterogeneity produces an equilibrium wealth distribution describing well the Γ -distribution observed at small and intermediate wealth as well as the Pareto tail, see figure below.



[1] Marco Patriarca and Anirban Chakraborti, *Kinetic exchange models: From molecular physics to social science*, Am. J. Phys. **81**, 618 (2013)
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[2] Els Heinsalu and Marco Patriarca, *Kinetic models of immediate exchange*, Eur. Phys. J. B **87**, 170 (2014)
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