EQUILIBRIUM, GROWTH AND LOCAL INTERACTIONS: AN APPROACH BASED ON THE POLTEROVICH MODEL

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Outline of the theme

In 1978 the article by Viktor M. Polterovich "Equilibrium Trajectories of Economic Growth" was published in the volume *Methods of Functional Analysis in Mathematical Economics*, B. A. Efimov., Ed., Nauka Publ., Moscow, 1978, pp. 56-97 (in Russian). The paper was translated into English and re-published in *Econometrica* 51 (1983) 693–729, DOI. A characteristic feature of the model suggested in Polterovich's paper, anticipating the modern trends of the development of Economic Theory, was the revolutionary approach abandoning the hypothesis of full rationality of economic agents. In the general version of the proposed equilibrium framework, the demand functions of the market participants were described not in terms of the maximization of utilities subject to budget constraints, but in terms of general multivalued demand operators, satisfying some natural axioms, first of all, the Wald monotonicity condition, later referred to by Hildenbrand as the "Law of Demand". The Polterovich model and its stochastic analogues served as a convenient laboratory that made it possible to obtain a number of new results in the theory of economic dynamics and equilibrium. Among those, one can mention quantitative turnpike theorems, turnpike theorems with exponential estimates, central limit theorems of probability theory (both classical and functional ones) for stochastic growth models, and a theory of economic dynamics and equilibrium with local interactions among agents.

Publications:

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Balanced states in stochastic economies with locally interacting agents, 1998, Stochastics, v. 64, 235-253 (with M.A.H. Dempster and S.A. Pirogov). DOI

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