TUT 3: Collective Dynamics of Firms: A Statistical Physics Approach (SOE)

The dynamics of individual firms is hard to predict and depends on many firm specific factors, ranging from location and taxes to managerial talent. The collective dynamics observed on the aggregate level of a system of firms, however, shows some remarkable regularities, e.g. in the skewed distribution of firm sizes, or the Laplacian distribution of growth rates. We derive these regularities from analyzing data sets of real firms. The focus is then on explaining the dynamics by agent-based stochastic models of different complexity. Starting from simple multiplicative stochastic processes, we incorporate economic concepts such as entry and exit dynamics, competition and cooperation, adoption of behavior, or path dependence, to highlight different aspects of industrial organization.

Time: Sunday 16:00–18:00　　　　　　　　　　　　　　　　　　　　　　Location: HSZ 04

Tutorial　　　　　　　　TUT 3.1　Sun 16:00　HSZ 04
Collective Dynamics of Firms: A Statistical Physics Approach — ●Frank Schweitzer — Chair of Systems Design, ETH Zurich, Kreuzplatz 5, 8032 Zurich, Switzerland

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