Kinematics and Dynamics of Pareto-Zipf's and Gibrat's laws

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Abstract

Pareto-Zipf's law and Gibra's law have been observed simultaneously in high-frequency data for personal income and company's size and profit. Namely, the upper tails of pdf has power-law behaviour (Pareto-Zipf's law) and the growth-rate pdf in this region is statistically independent from the original variable, *i.e.* income (Gibrat's law). This finding suggests that these laws are connected at a deeper mathematical level. In this talk, we explore this inter-relationship in detail and will also discuss related issues.