

Theoretical modelling and empirical analysis of wealth and income distributions

We aim to show that a fairer distribution of wealth and income leads to higher consumption and to stronger economic growth, and to comprehensively discuss desirable schemes for the redistribution of income and wealth through taxation. For this reason, we have started a research project on the following.

1.1. Theory and models.

- We will study random exchange models for the distribution of wealth: limit theorems for discrete-time discrete-state-space Markov chain including the analysis of thermodynamic limits.
- We will work on models for the distribution of income and their relation with taxation and redistribution.
- We will integrate these models in wider macroeconomic models of the economy with implications on inequality, consumption and growth.
- We will benchmark agent-based models for income distribution and their dynamics using fitted stochastic distributions derived from the collected empirical data.

1.2. Empirical analysis.

- We plan to collect world-wide data on the empirical distributions of wealth and income.
- We will use Approximate Bayesian Computation to fit models to the empirical distributions.
- We will feed the results of our estimates in wider macroeconomic models as outlined above

This is a collaborative project between the University of Sussex (US), the University of Vienna (UW) in Austria, and the International Christian University (ICU) in Tokyo, Japan. The researchers involved are (in alphabetical order): Bertram Düring (US), Nicos Georgiou (US), Taisei Kaizoji (ICU), Sara Merino Aceituno (UW, US), Lukas Pichl (ICU), Enrico Scalas (US). For a recent paper see [arXiv:1609.08978 \[math.PR\]](https://arxiv.org/abs/1609.08978).
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