OpenSourceEconomics

A platform for transdisciplinary collaboration

April 20, 2020

Open Source
Economics Bonn

Computational modeling in economics

- provide learning opportunities
- assess importance of competing mechanisms
- predict the effects of public policies

Development

- economic model
- mathematical formulation
- computational implementation

Application

- verification
- estimation
- validation
- uncertainty quantification

OpenSourceEconomics

We are a group of economists using computational models in the pursuit of our research. By adopting sound software engineering practices, we hope to leverage tools from computational science and increase the transparency and extensibility of our implementations. In doing so, we expand the set of possible economic questions that we can address and improve the quality of our answers.

OpenSourceEconomics

Learn, build, share, repeat.

Bonn, Germany OpenSourceEconomics@policy-lab.org

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Pinned repositories Customize pinned repositories

respy
Python package for the simulation and estimation of a prototypical finite-horizon dynamic discrete choice model
Python ★ 15 11

grmpy
Python package for the simulation and estimation of generalized Roy model
Jupyter Notebook ★ 10 6

career_decisions_data
Dataset for the seminal paper on dynamic human capital investment by Keane & Wolpin (1997)
Jupyter Notebook ★ 1

Find a repository… Type: All Language: All New

respy
Python package for the simulation and estimation of a prototypical finite-horizon dynamic discrete choice model
economics software-engineering structural-microeconometrics
Python MIT 11 ★ 15 39 1 Updated 15 minutes ago

ruspy
Python package for the replication of John Rust's 1987 paper on the optimal replacement of GMC bus engines
Jupyter Notebook MIT 1 ★ 0 2 0 Updated 3 hours ago

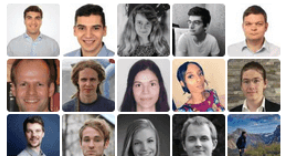
norpy
Python package for the analysis of human capital investment decisions using Norwegian population panel data.
Python 1 ★ 1 7 1 Updated 2 days ago

soepy

Top languages
Jupyter Notebook Python Scheme TeX Fortran

Most used topics Manage
software-engineering behavioral-economics economics risk-preferences time-preferences

People 19 ›



Members

- Professors
- Postdoctoral researchers
- PhD students
- Master students
- Bachelor students

Models

- respy
- ruspy
- grmpy

Infrastructure

- estimagic
- robupy
- econsa

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Welcome to respy's documentation!

PyPI | GitHub | Issues | Pull Requests

`respy` is a tool to solve, simulate, and estimate structural econometric models. It provides the computational support for several research projects that analyze the economics driving agents' educational and occupational choices over their life cycle within the framework of a finite-horizon discrete choice dynamic programming model.

The package is under ongoing development. We add new features every week and try to make it more flexible and easier to use without sacrificing execution speed. Our goal is to cover any model that falls under the classification of Keane-Wolpin-Eckstein models as proposed in a recent survey by Aguirregabiria and Mira (2010) and we are almost there. Already, you can replicate the seminal work by Keane and Wolpin (1994) and Keane and Wopin (1997).

Please visit the rest of our documentation to get more detailed information.

- Quickstart
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If you have any questions or comments, please do not hesitate to contact us on slack or file an issue on GitHub.

Welcome to estimagic's documentation!

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  - Give you freedom
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  - Overview
  - The params DataFrame
  - Specification of Constraints
  - List of algorithms
- Differentiation
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Support

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Figure: Impressions

PASC

Retreat

Cooperations

DIW BERLIN

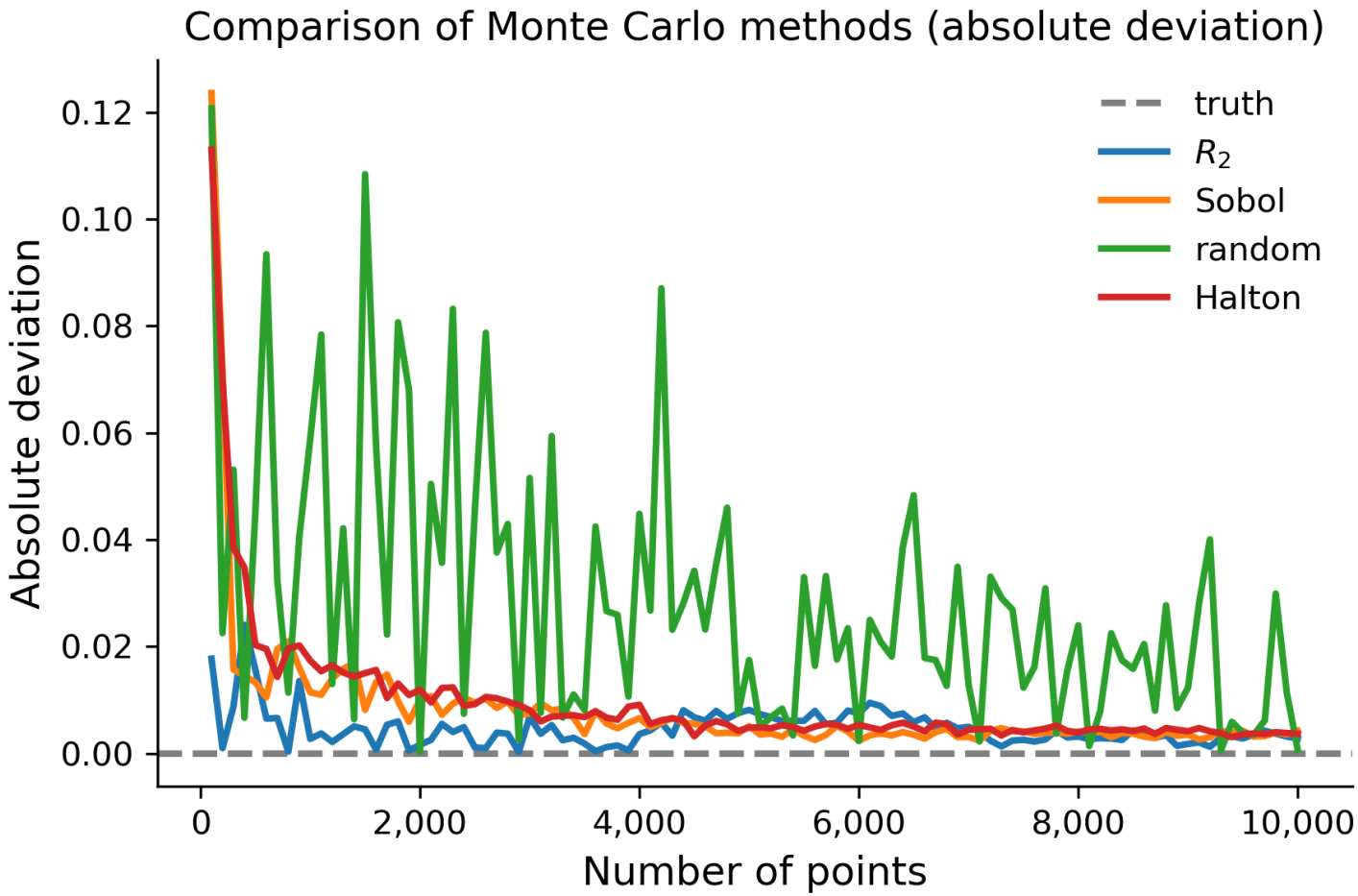
SMART DATA ANALYTICS
FROM DATA TO KNOWLEDGE

Institute for
Numerical Simulation

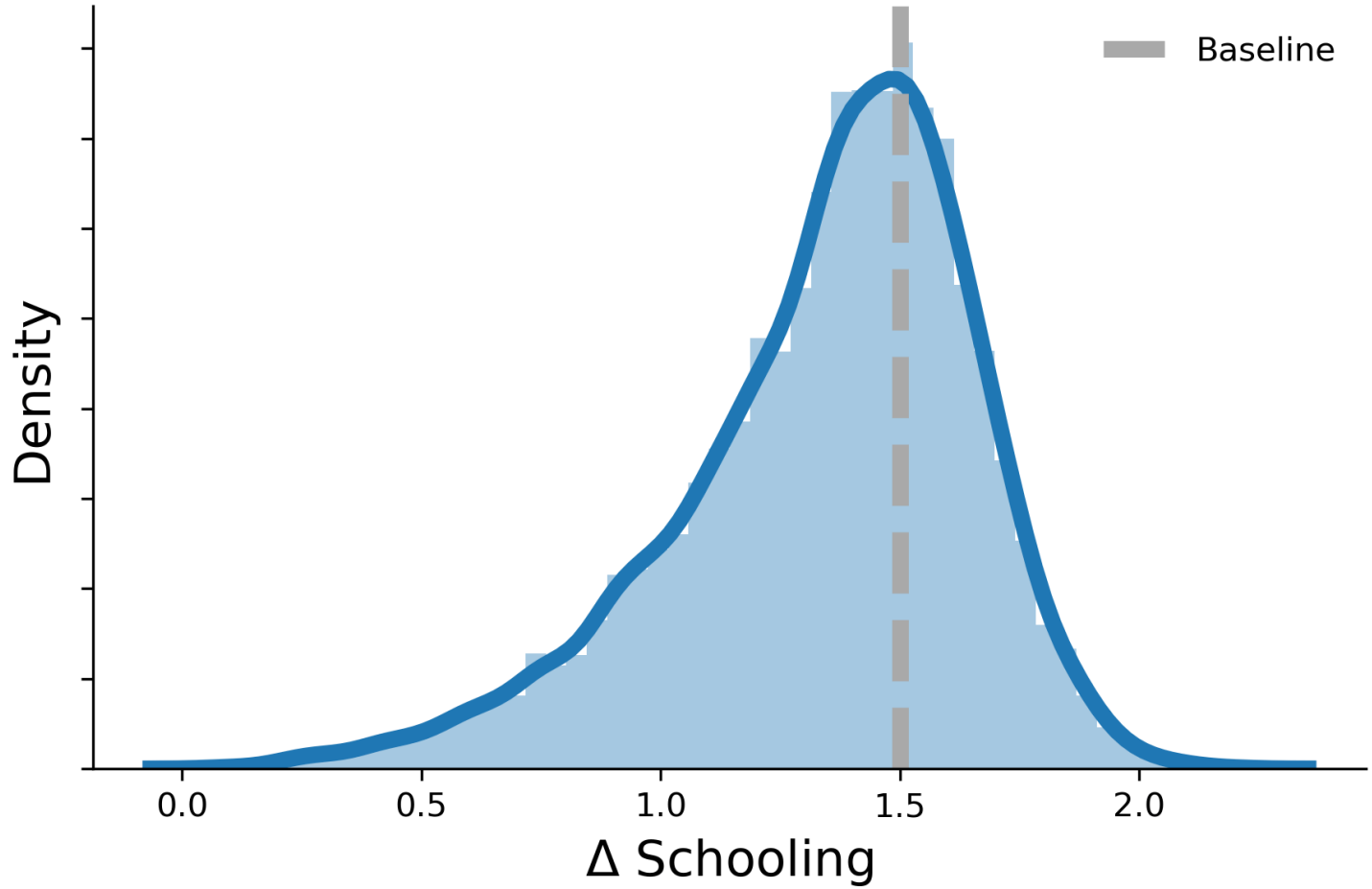
Statistisk sentralbyrå
Statistics Norway

Example projects

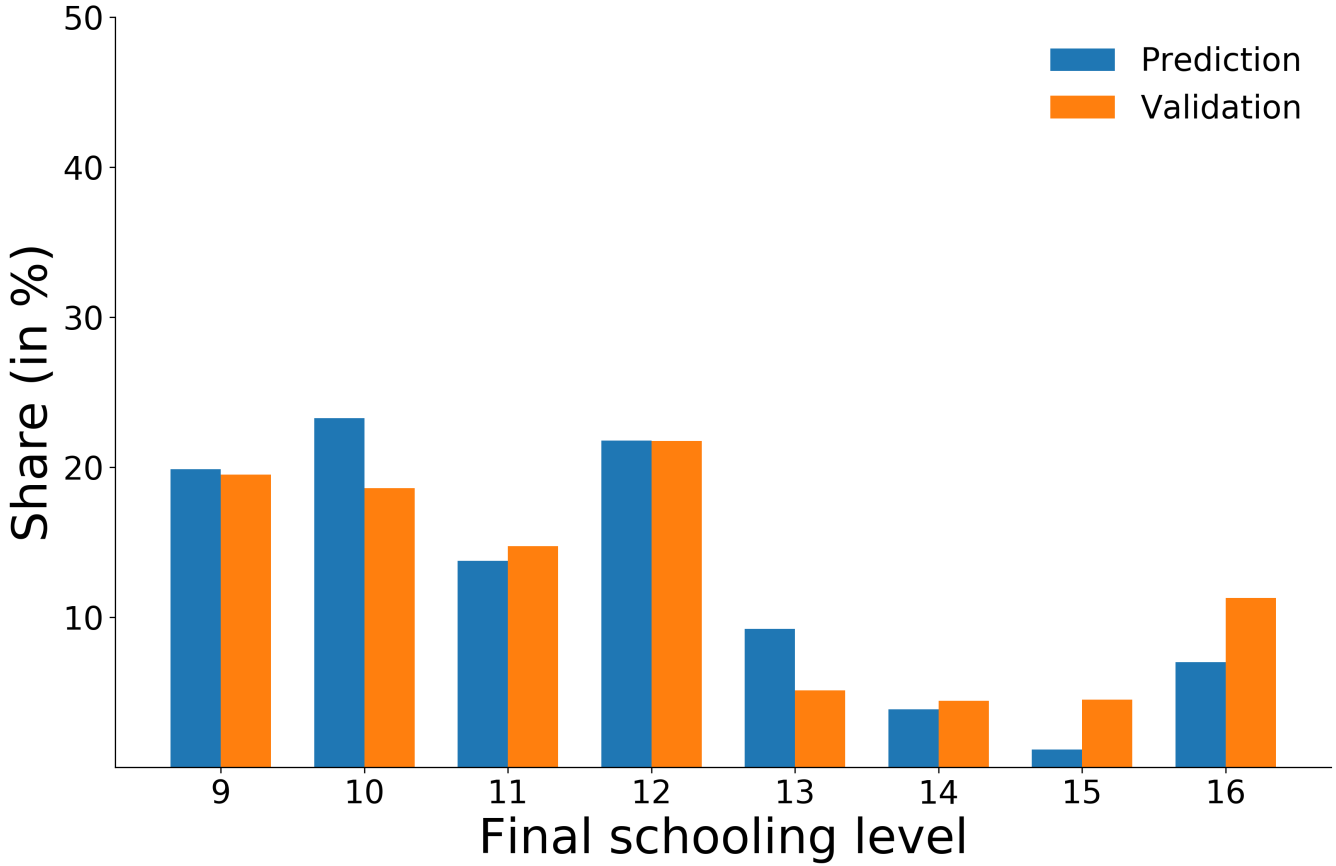
Advanced numerical integration



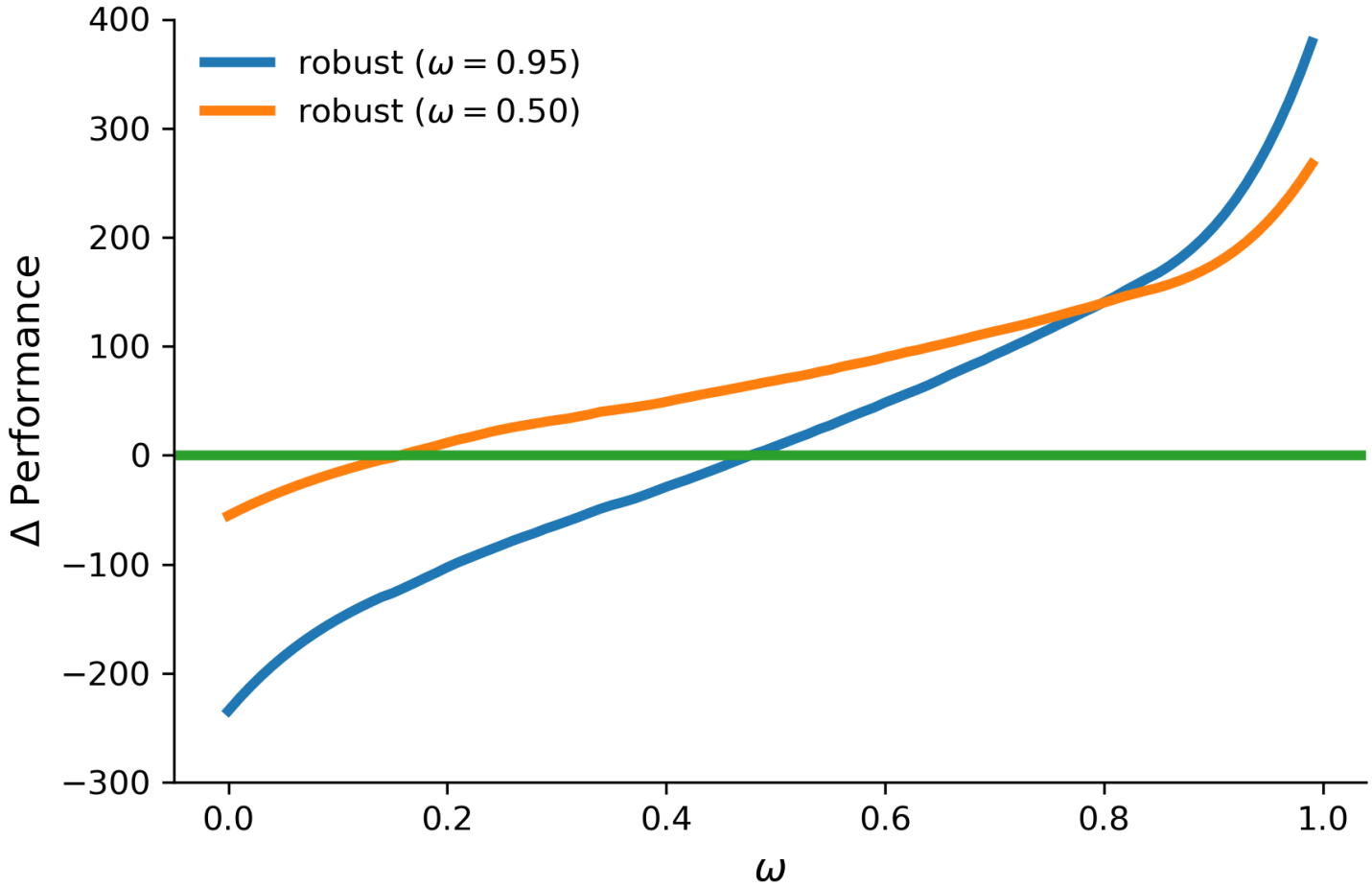
Uncertainty quantification



Option value of schooling



Robust decision making



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