

# Structural behavioral economics

Working group

October 7, 2019

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GitHub






# Motivation

## General setup














- ▶ joint discussion of selected topic (45 - 60 minutes)
  - ▶ scientific computing
  - ▶ research article
  - ▶ research project
- ▶ student contributions
  - ▶ presentation (20 minutes, up to 10 slides)
  - ▶ lightning talks (5 minutes, no slides)

- ▶ Wednesday, noon
  - ▶ deadline for student contributions
  - ▶ announcement of selected topic
  - ▶ selection of student presentation
- ▶ Monday, lecture
  - ▶ joint discussion
  - ▶ student presentation (peer-grading)
  - ▶ lightning talks



## Figure: Signup process

topics-course-reading-group-signup ☆   Last edit was yesterday at 9:10 AM   

File Edit View Insert Format Data Tools Add-ons Help

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	A	B	C	D	E	F	G	H	I
1	<b>Reading Group</b>								
2									
3	joint discussion	student presentation	lightning talk						
4									
5	<b>Name</b>	<b>Week</b>	<b>Date</b>	<b>Article</b>					
6	Philipp Eisenhauer	1	07. October	Introduction					
7		2	14. October	Structural behavioral economics					
8		3	21. October						
9		4	28. October						
10		5	4. November						
11		6	11. November						
12		7	18. November						
13		8	25. November						
14		9	2. December						
15		10	9. December						
16		11	16. December						
17		12	23. December						
18		13	6. January						
19		14	13. January						
20		15	20. Januar						

+  **Tabell1** Sheet2  Explore

## Tooling



## 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](mailto:OpenSourceEconomics@policy-lab.org)

📁 Repositories 20

👤 People 19

👥 Teams 0

⚙️ Settings

## 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



gmpy

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-microeconomics

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



### soedpy



### Top languages

Jupyter Notebook Python  
Scheme TeX Fortran

### Most used topics

Manage

software-engineering  
behavioral-economics  
economics risk-preferences  
time-preferences

### People

19 >





## Communication

Slack     <http://bit.ly/human-capital-slack>  
<http://bit.ly/ose-slack>

GitHub   <http://bit.ly/human-capital-github>  
<http://bit.ly/ose-github>

## Figure: Communications

The screenshot displays a Slack workspace named 'HumanCapital...' with a sidebar on the left containing a list of channels. The selected channel, '#structural-behavioral-economics', is shown in the main area. The channel header includes the name, a description, and a search bar. Below the header, a list of members is shown, including Philipp Eisenhauer, Rafael Suchy, and Valerie Stottuth. The main content area shows the channel's history, starting with a message from Philipp Eisenhauer on Wednesday, February 20th, describing the channel's purpose. A subsequent message from Valerie Stottuth on the same day mentions the channel's creation. The interface also features a right-hand sidebar with options like 'About this channel', 'Channel Details', 'Highlights', 'Pinned Items', 'Members', 'Add People', 'Apps', 'Shared Files', and 'Notification Preferences'.

**HumanCapital...** Philipp Eisenhauer

**#structural-behavioral-economics** 12 | 10 | 10 | 0 | Add a topic

**About this channel** ×

- Channel Details ➤
- Highlights ➤
- Pinned Items ➤
- 3 Members ▼
  - Philipp Eisenhauer (you) ●
  - Rafael Suchy ○
  - Valerie Stottuth ○
- Add People
- Apps ➤
- Shared Files ➤
- Notification Preferences ➤

**#structural-behavioral-economics**

You created this channel on February 20th. This is the very beginning of the **#structural-behavioral-economics** channel. Description: course on structural behavioral economics ([edit](#))

+ Add an app [Add people to this channel](#)

**Wednesday, February 20th**

**Philipp Eisenhauer** 5:43 AM  
joined #structural-behavioral-economics.

**Philipp Eisenhauer** 5:43 AM  
set the channel description: course on structural behavioral economics

**Valerie Stottuth** 5:48 AM  
was added to #structural-behavioral-economics by Philipp Eisenhauer. Also, Rafael Suchy joined.

**Yesterday**

**Philipp Eisenhauer** 8:24 AM  
renamed the channel from "structural\_behavioral" to "structural-behavioral-economics"

**Philipp Eisenhauer** 8:24 AM  
renamed the channel from "structural-behavioral-economics" to "structural-behavioral-economics"

[Message #structural-behavioral-economics](#)

## Common baseline

- ▶ Keane, M. P., & Wolpin, K. I. (1997). The career decisions of young men. *Journal of Political Economy*, 105(3), 473–522.
- ▶ respy. (2018). *respy: An open-source package for the simulation and estimation of a canonical model of human capital investment*. Retrieved from <http://doi.org/10.5281/zenodo.595547>

## Figure: Code documentation

respy 1.2.1 documentation »

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Search

Enter search terms or a module, class or function name.

Welcome to respy's documentation!

[PyPI](#) | [GitHub](#) | [Issues](#) | [Pull Requests](#)

respy is an open-source Python package for the simulation and estimation of a prototypical finite-horizon discrete choice dynamic programming model. We build on the baseline model presented in:

Keane, M. P. and Wolpin, K. I. (1994). *The Solution and Estimation of Discrete Choice Dynamic Programming Models by Simulation and Interpolation: Monte Carlo Evidence*. *The Review of Economics and Statistics*, 76(4): 648-672.

license [MIT](#)

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  - [Tutorial - Keane and Wolpin \(1994\) - Simulation](#)
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- [Economics](#)
  - [The Economic Model](#)
  - [Solution and Estimation](#)
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  - [Reliability](#)
  - [Scalability](#)
  - [Software Engineering](#)
- [Development](#)
  - [Docker](#)

## **Behavioral structural econometrics**

- ▶ DellaVigna, S. (2018). Structural behavioral economics. In D. Bernheim, S. DellaVigna, & D. Laibson (Eds.), *Handbook of behavioral economics*. Elsevier.

# **Student project**

# Conclusion

# Appendix



- DellaVigna, S. (2018). Structural behavioral economics. In D. Bernheim, S. DellaVigna, & D. Laibson (Eds.), *Handbook of behavioral economics*. Elsevier.
- Keane, M. P., & Wolpin, K. I. (1997). The career decisions of young men. *Journal of Political Economy*, 105(3), 473–522.
- Keshav, S. (2016). *How to read a paper*. Retrieved from <http://blizzard.cs.uwaterloo.ca/keshav/home/Papers/data/07/paper-reading.pdf>
- Purugganan, M., & Hewitt, J. (2004). *How to read a scientific article*. Retrieved from <http://www.owl.net.rice.edu/~cainproj/courses/HowToReadSciArticle.pdf>

respy. (2018). *respy: An open-source package for the simulation and estimation of a canonical model of human capital investment*. Retrieved from <http://doi.org/10.5281/zenodo.595547>

University Libraries, University of Colorado Boulder. (2018). *Strategy: Notetaking & Reading*. Retrieved from <http://libguides.colorado.edu/c.php?g=622592&p=4336669>