Econ 810: Macro Labor with Micro Data

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Spring 2025 (Second Half)

In this class, we will use theory and data to try to answer the following questions:

1. What causes fluctuations in income over short and long horizons?

2. How do individuals respond to fluctuations in income?

3. How can policy insure against these fluctuations?

We will start to answer these questions by using heterogeneous agent models in the tradition of Bewley-Huggett-Aiyagari. Over the course of the semester, we will be enriching these models and testing their predictions against the data. This process will introduce us to the following topics:

Statistical Representation of Earnings Process (Week 1)   In this section, we're going to use a statistical representation of the earnings process to guide our analysis of how individuals respond to income shocks both in the data and in a quantitative model.

- Main papers: Blundell, Pistaferri, and Preston (2008), and Kaplan and Violante (2010).

- Related papers: Storesletten, Telmer, and Yaron (2004), Guvenen (2009), Guvenen, Ozkan, and Song (2014), Guvenen, Karahan, Ozkan, and Song (2015), Braxton, Herkenhoff, Rothbaum, and Schmidt (2021).

Job Loss, Search, and Human Capital (Weeks 2-3)   In this section, we're going to start by considering a very specific labor income shock, job loss. We will additionally use job loss as a way to introduce labor search models. We'll consider random search models in week 2 and directed search models in week 3. This discussion will also introduce us into models of human capital dynamics, where human capital evolves during employment and unemployment spells. Finally, we'll integrate search into our Bewley-Hugget-Aiyagari model and start to think about policies to insurance against job loss.

- Main papers (week 2): Davis and von Wachter (2011), Jarosch (2014).

- Main papers (week 3): Menzio and Shi (2011), Huckfeldt (2016).

- Related papers: Ljungqvist and Sargent (1998), Couch and Placzek (2010), Jacobson, LaLonde, and Sullivan (1993), Krolikowski (2013), Jung and Kuhn (2012), Lise (2006), Lentz (2009), Krusell, Mukoyama, and Şahin (2010), Herkenhoff (2013), Braxton, Herkenhoff, and Phillips (2018), and Chetty (2008).

Life-cycle earnings inequality (Week 4) In this class, we are going to examine the sources of life-cycle income inequality. As part of this discussion we will start to endogenize human capital in the spirit of Ben-Porath.

- Main paper: Huggett, Ventura, and Yaron (2011)

- Related papers: Griffy (2017), Guvenen, Kaplan, Song, and Weidner (2017), Karahan, Ozkan, and Song (2022)

TBD - based upon class interest (Week 5)   .

Option 1: Intergenerational inequality: In this class, we are going to examine how the choices parents make influence their children's human capital and their subsequent earnings. Recent papers include, Lee and Seshadri (2019), Chetty, Hendren, Kline, and Saez (2014), Daruich (2018), Del Boca, Flinn, and Wiswall (2014).

Option 2: Recent advances in estimating income process w/ administrative data. Recently administrative earnings records based upon tax forms have caused a new series of papers of income process estimation. With more detailed data we can better open the black box of earnings dynamics. Recent papers include Guvenen et al. (2014), Guvenen et al. (2015) and Braxton et al. (2021).

1   Evaluation

There will be two components of your course grade:

1. *Weekly coding assignments*: For weeks 1-4 there will be a weekly homework assignment, which will require you do some empirical work and solve a quantitative model similar to the one we covered in class. **These assignments are due before the start of class the following week** (e.g., the week 1 assignment is due before the start of the 2nd week's class.) For each assignment turn in the codes you used to complete the assignment as well as a short write up of your findings. I've put a template for using Latex on the course dropbox page, I recommend starting to become comfortable with Latex or a similar writing package such as Lyx. Each assignment will count 15% of your final grade for the course. These assignments can be completed as a group.

2. *Project:* Using one of the models presented in class, conduct a policy experiment or counterfactual exercise. For example, introducing policy [X] increases welfare by [Y] percent, or the change in variable [X] has caused an increase in output by [Y] and a decline in unemployment by [Z]. As part of your quantitative model, at least one of the parameters of your model should be calibrated to match a moment from the data, and compare at least one non-targeted moment from your model to the data (its okay if they do not match well). The goal of this project is to get students prepared to write their second year field paper. **In week 6 (4/30/2025), all students taking the class for credit will give a presentation on their project. Please discuss your project idea with me by the 4th class (4/16/2025).** The project will count 40% of your grade. This assignment must be completed individually.

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