

# Econ 34430: Topics in Labor Markets: Earnings and Employment

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## Overview

The class covers recent developments in the understanding of the determinants of employment and earnings in the labor market. We start by studying extensive and intensive labor supply decisions in the short and long run. We then look at the effect of uncertainty in earnings by studying the joint dynamics of earnings and consumption. We continue by studying contracting between firms and workers and look at the link between firm shocks and employee earnings. Finally, the course covers models with two-sided heterogeneity with complementarities, sorting and mobility frictions. The methods presented in the course range from nonparametric econometrics methods to solving equilibrium and dynamic contracting problems. Students should expect to learn how to work with data and how to develop, solve and evaluate structural models of the labor market. Homeworks, slides and notes for this class can be found online at: <http://econ34430.lamadon.com>.

## Agenda & Reading List

- **Labor supply.** We cover the classical theory of labor supply based on the review paper [Keane \(2011\)](#). We pay particular attention to [MaCurdy \(1982\)](#); [Altonji \(1986\)](#); [Pistaferri \(2003\)](#); [Blundell, Duncan, and Meghir \(1998\)](#). We cover how kinks and discontinuity can be used to get information on labor supply decisions by looking at [Saez, Slemrod, and Giertz \(2012\)](#), as well as how to use random and convex budget sets ([Hausman, 1979](#); [Blomquist, Kumar, Liang, and Newey, 2014](#)). We will study estimation methods and results using dynamic discrete choice models following the review paper [Aguirregabiria and](#)

Mira (2002) and we will study a method for discretizing unobserved continuous heterogeneity in estimation as in Bonhomme, Lamadon, and Manresa (2016).

- **Earnings and consumption dynamics.** We start by studying the properties of earnings and consumption processes with Blundell, Pistaferri, and Preston (2008). Then we see how under stronger market assumptions, but weaker preference assumptions, close form solutions can be found for labor supply and consumption in Heathcote, Storesletten, and Violante (2014) which extends the result of Constantinides and Duffie (1996). Our final step looks in details at Arellano, Blundell, and Bonhomme (2014) which estimates non-parametrically the income and consumption processes. To understand their approach we go over the identification of mixtures and hidden Markov process in short panels (Hall and Zhou, 2003; Hu and Shum, 2012).
- **Firm-worker contracting.** We start with motivational evidence on shock transmission in Guiso, Pistaferri, and Schivardi (2005). Then we study two sided contracting under one-sided limited commitment and characterize the endogenous downward rigidity as in Harris and Holmstrom (1982). We then cover the two-sided limited commitment case of Thomas and Worrall (1988). To do so we will derive the mapping from the Bellman equation into a recursive contract formulation (Spear and Srivastava, 1987). We will then add an incentive problem to this contracting problem and derive the optimal contract without shock (Shi, 2008) and with shocks (Lamadon, 2014). We conclude with contract formulation using promised marginal utility to make these problems tractable (Marcet and Marimon, 2011).
- **Sorting in the labor market.** We start with understanding the log-linear fixed effect regression Abowd, Kramarz, and Margolis (1999), its applications (Card, Heining, and Kline, 2013) and its limitations (Andrews, Gill, Schank, and Upward, 2008; Eeckhout and Kircher, 2011). We then look at structural models of sorting with and without frictions and their identification (Becker, 1974; Choo and Siow, 2006; Shimer and Smith, 2000; Hagedorn, Law, and Manovskii, 2014). We finish with non parametric identification of sorting with complementarities and endogenous mobility in Bonhomme, Lamadon, and Manresa (2015).

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