

## Seminar: Dynamic Models in Empirical Industrial Organization

Content: In this course, we will cover several topics in empirical industrial organization with a strong focus on dynamic decision making. More specifically, we will discuss the estimation of dynamic models of consumer demand, firm investment, and entry/exit decisions. The goal of this course is to understand how to formulate a model of optimal consumer and/or producer decisions in an environment with state dependence and estimate the structural parameters using appropriate data and numerical techniques.

Prerequisite:

Target Group:

Examination: Presentation and seminar paper

Credit points: 2 SWS / 4 ECTS

Topics and main seminar papers:

**1. Introduction to dynamic models**

Aguirregabiria, V. and Mira, P. “Dynamic discrete choice structural models: A survey”. In: *Journal of Econometrics* 156.1 (2010), pp. 38–67

**2. Optimal stopping problems**

Rust, J. “Optimal replacement of GMC bus engines: An empirical model of Harold Zurcher”. In: *Econometrica: Journal of the Econometric Society* (1987), pp. 999–1033

**3. Two-step estimation (single-agent)**

Hotz, V. J. and Miller, R. A. “Conditional choice probabilities and the estimation of dynamic models”. In: *The Review of Economic Studies* 60.3 (1993), pp. 497–529

**4. Dynamic demand for differentiated products**

Hendel, I. and Nevo, A. “Intertemporal price discrimination in storable goods markets”. In: *American Economic Review* 103.7 (2013), pp. 2722–51

**5. Framework for industry dynamics**

Ericson, R. and Pakes, A. “Markov-perfect industry dynamics: A framework for empirical work”. In: *The Review of Economic Studies* 62.1 (1995), pp. 53–82

**6. Two-step estimation (multi-agent)**

Bajari, P., Benkard, C. L., and Levin, J. “Estimating dynamic models of imperfect competition”. In: *Econometrica* 75.5 (2007), pp. 1331–1370

**7. Entry in oligopoly game**

Aguirregabiria, V., Mira, P., and Roman, H. “An estimable dynamic model of entry, exit, and growth in oligopoly retail markets”. In: *The American economic review* 97.2 (2007), pp. 449–454

8. **Innovation in dynamic oligopoly**

Goettler, R. L. and Gordon, B. R. “Does AMD spur Intel to innovate more?” In: *Journal of Political Economy* 119.6 (2011), pp. 1141–1200

9. **Dynamic product position**

Sweeting, A. “Dynamic product positioning in differentiated product markets: The effect of fees for musical performance rights on the commercial radio industry”. In: *Econometrica* 81.5 (2013), pp. 1763–1803

10. **dynamic effects of the regulation on entry and investment**

Ryan, S. P. “The costs of environmental regulation in a concentrated industry”. In: *Econometrica* 80.3 (2012), pp. 1019–1061