

# **Ben Heijdra (University of Groningen)**

## **Aims**

The course deals with a number of advanced topics in macroeconomics. We start out by developing the Ramsey Model. This model postulates the existence of a representative agent who maximizes an intertemporal utility function under perfect foresight. In the Extended Ramsey Model, the agent not only chooses consumption of goods but also labour supply. Next, we introduce the continuous-time overlapping generations model due to Yaari and Blanchard. In this model, individual agents face lifetime uncertainty (longevity risk) and thus have finite lives. New agents are born at each instant, so (infinitely) many disconnected generations co-exist at any moment in time. We show the main applications of the continuous-time overlapping generations model and also discuss some recent developments. In the final topic of this course, we study the discrete-time overlapping generations model due to Samuelson and Diamond. This model is very useful to discuss the effects of pensions and population ageing. The course makes students familiar with the main analytical tools and modeling strategies in modern macroeconomic theory.

## **Credits**

3 ECTS

## **Time Schedule**

Block 2

## **Prerequisites**

Macroeconomics first year MPhil. Knowledge of dynamic optimization.

## **Examination**

Take-home assignment.

## **Course Outline and Literature**

BJH = Heijdra, Ben J. (2009). Foundations of Modern Macroeconomics, Second Ed. Oxford: Oxford University Press.

\*=mandatory reading

## **Lecture 1: Dynamic Representative-Agent Models**

- \*BJH, Chapters 13.5 and 15

- \*Judd, K.L. (1987). The welfare cost of factor taxation in a perfect-foresight model. *Journal of Political Economy*, 95:675-709.
- Heijdra, B.J. (1998). Fiscal policy multipliers: The role of market imperfection and scale economies. *International Economic Review*, 39:659-696.

## **Lecture 2: The Continuous-Time Overlapping Generations Model: Basic Theory and Applications**

- \*BJH, Chapter 16.
- \*Heijdra, B.J. & Ligthart, J. E. (2007). Fiscal policy, monopolistic competition, and finite lives. *Journal of Economic Dynamics and Control*, 31: 325-359.

## **Lectures 3 & 4: The Continuous-Time Overlapping Generations Model: Beyond the Basic Model**

- \*Heijdra, B. J. & Romp, W.E. (2008). A life-cycle overlapping-generations model of the small open economy. *Oxford Economic Papers*, 60: 89-122.
- \*Heijdra, B. J. & Mierau, J.O. (2009). Annuity market imperfection, retirement, and economic growth. CESifo Working Paper, Nr. 2717, July 2009.
- \*Heijdra, B. J. & L.S.M. Reijnders (2009). Economic growth and longevity risk with adverse selection. CESifo Working Paper, Nr. 2898, December 2009.

## **Lecture 4 & 5: Discrete-Time Overlapping Generations Model: Basic Model and Applications**

- \*BJH, Chapter 17.
- \*Heijdra, B. J., Mierau, J.O. & L.S.M. Reijnders (2010). The tragedy of annuitization. CESifo Working Paper, July 2010..