Empirical Macroeconomics

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1. General description

This is a course on empirical macroeconomics/applied time series, with a focus on Bayesian methods to conduct inference in macro-econometric models. The emphasis on Bayesian inference is motivated by the increased popularity of this methodology, which is gradually becoming the dominant paradigm in macro/time-series empirical work. Topics include Bayesian methods for prediction with big data and large information sets, vector autoregressions (VARs), structural VARs, state-space models, dynamic stochastic general equilibrium (DSGE) models, model comparison and model choice (although we will probably not have enough time to fully cover all of them).

2. Evaluation

Evaluation will be based on (i) a take home exam or (ii) a presentation of a recently published paper. The winner between (i) and (ii) will be decided towards the beginning of the course.

3. Approximate plan of the course and some useful references

Introduction to Bayesian inference, and Bayesian analysis of linear regression models

Geweke (2005), Bauwens et al. (1999), Gelman et al. (2004), Hamilton (1994)

Prediction with big data and large information sets

Hastie et al. (2015), ch. 1 and 2, Park and Casella (2008), Giannone et al. (2020)

(Bayesian) Vector autoregressions

Hamilton (1994), Canova (2007), Doan et al. (1984), Kadiyala and Karlsson (1997), Sims and Zha (1998), Karlsson (2013), Banbura et al. (2010), Giannone et al. (2015), Giannone et al. (2019), Del Negro and Schorfheide (2011)

Structural VARs

Christiano et al. (1999), Stock and Watson (2001), Blanchard and Quah (1989), Gali (1999), Uhlig (2005), Rubio-Ramirez et al. (2010)

Monte carlo integration

Gelman et al. (2004), Bauwens et al. (1999), Geweke (2005)

State-space models, and the Kalman filter and smoother

Hamilton (1994), Kim and Nelson (1999), DeJong and Dave (2011)

Inference in DSGE models

An and Schorfheide (2007), DeJong and Dave (2011), Herbst and Schorfheide (2015), Smets and Wouters (2007), Justiniano et al. (2010)

Model comparison and model choice

Gelman et al. (2004), Kass and Raftery (1995), Geweke (1998), section 4, Chib (1995), Smets and Wouters (2007)

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