



Research
Education
Outreach

CCA

Allievi Program, Master in Economics, and Ph.D. in Economics

MACROECONOMETRICS

Fall 2022

Instructor: Luca Gambetti

Introduction

The objective of the course is twofold. First, to present some of the most popular time series models designed to analyze the propagation mechanisms and measure the effects of economic shocks. In particular, we will cover Structural Vector Autoregressive models as well as several extensions like the Factor Augmented VAR, Smooth transition VAR, Threshold VAR and Time-Varying Coefficients VAR. The second objective is to discuss some recent applications of these models in economics. The focus will be on the effects of both conventional and unconventional monetary policy, fiscal policy shocks and other business cycle shocks. Matlab programs to implement the theoretical methods and replicate the applications studied in class will be available to students.

Requirements: basic knowledge of econometrics and time series econometrics.

Contents

1. Empirical Time Series Models
 - (a) Vector Autoregressions (VAR) and Vector Moving Averages (VMA)
 - (b) Structural VARs (SVAR)
 - (c) Factor Augmented VAR (FAVAR)
 - (d) Factor Models

- (e) Smooth Transition VAR
 - (f) Time-Varying Coefficients VAR (TVC-VAR)
2. Monetary Policy
 - (a) Conventional monetary policy
 - (b) Unconventional monetary policy
 3. Fiscal Policy
 - (a) Tax and government spending shocks
 - (b) Fiscal policy and fiscal foresight
 4. Business cycles
 - (a) Macroeconomic and policy uncertainty
 - (b) News and business cycles
 - (c) Nonlinear effects of macroeconomic shocks
 - (d) Skewed business cycles
 - (e) Time-varying macroeconomic dynamics