Euro Area Business Cycle Network Training School

Empirical Methods for Business Cycle Analysis

by

Christian Wolf (MIT)

University of Mannheim
Germany

10-12 June 2024

Deadline: 6pm (UK time), Friday 15 March 2024

General Description

We are pleased to announce details of the latest EABCN Training School; a three-day course entitled "Empirical Methods for Business Cycle Analysis". Professor Christian Wolf (MIT) will teach the course. It is primarily aimed at participants in the Euro Area Business Cycle Network but applications will also be considered from doctoral students, post-doctoral researchers and economists working in central banks and government institutions outside of the network, as well as commercial organisations (fees are applicable for non-network non-academic organisations).

Tentative course outline

This course aims to bring participants to the research frontier on how to estimate the causal effects of macroeconomic shocks, with a particular focus on monetary and fiscal policy. We will discuss how to: plausibly *identify* those shocks; best *estimate* their causal effects in finite samples; and *use* those estimated shock causal effects for macroeconomic policy evaluation. In the first two days we discuss how to use time-series data for these purposes, while the third day focuses on cross-sectional data. The analysis throughout pushes the boundaries on how much we can say without committing to explicit structural macro models.

The course is divided into three lecture sessions, each followed by a practice session.

Day 1 – Monday, June 10, 2024
Topic: "Impulse response estimation for macroeconomic shocks and policies"
Morning lecture session from 09:00 AM - 12:00 NOON (CEST)
Afternoon practice session from 01:30PM - 3:30PM (CEST)

In the morning, we begin by reviewing the classical impulse-propagation framework, introducing the Structural Vector Moving Average (SVMA) model, and setting up the SVMA identification challenge. We discuss two solutions: identification through invertibility plus additional exclusion restrictions, and identification through instruments/proxies. We then intro-

duce Vector Autoregressions (VARs) and Local Projections (LPs) as two techniques for how to in practice operationalize our theoretical identification results. Throughout we illustrate the analysis with applications to monetary and fiscal policy shocks.

In the afternoon session, we discuss estimation techniques beyond standard VARs and LPs. We compare their performance in practice and conclude with some recommendations for applied work. If time permits, we will also discuss non-linear versions of these estimators.

Day 2 – Tuesday, June 11, 2024
Topic: "From policy shocks to policy rule counterfactuals"
Morning lecture session from 09:00 AM - 12:00 NOON (CEST)
Afternoon practice session from 01:30PM - 3:30PM (CEST)

In the morning, we discuss how to go from the causal effects of policy shocks to evaluating systematic policy rule counterfactuals. We give conditions under which those policy causal effects – in conjunction with reduced-form projections – identify a wide class of policy rule counterfactuals, and also discuss the scope and limitations of this theoretical identification result. Finally, we turn those theoretical insights into an implementable method.

In the afternoon, we present applications to monetary policy counterfactuals. The discussion will be "hands-on", showing how to implement the policy counterfactual method in practice.

Day 3 – Wednesday, June 12, 2024
Topic: "Micro to Macro"
Morning lecture session from 09:00 AM - 12:00 NOON (CEST)
Afternoon practice session from 01:30PM - 3:30PM (CEST)

In the morning, we discuss how – if at all – we can use cross-sectional data to evaluate the effects of aggregate shocks and policies. First, we characterize the estimand of micro-level causal variation, and show how (and when) it differs from the macroeconomic object of interest. Second, we ask how to go from cross-sectional regressions to macro outcomes.

In the afternoon, we apply the theoretical insights to two applications: on the aggregate effects of stimulus checks, and on the direct vs. indirect effects of monetary policy.

Practice sessions

The practice sessions are a mix of supplementary practical results and hands-on illustrations. The illustrations will be based on Matlab code.

Prerequisites and required readings

Participants should ideally have some experience in (i) basic linear time series analysis and (ii) linearized structural macroeconomic modeling (both state-space and sequence-space). A list of required readings will be distributed before the class.

Administrative Information

We ask that you send a current version of your CV. PhD students must also specify in which way the school will be useful for their current research (max 300 words).

The course will take place in Mannheim, Germany. More information about logistics will be circulated closer to the date.

Participants will be invited to make their own arrangements regarding their travel, accommodation and meals. Further information about hotel options will be available to successful applicants.

Participants from non-academic institutions where the employer is not a member of the EABCN network are charged a course fee of EUR2000.

How to Apply:

Candidates who are CEPR affiliated or already have a CEPR profile should apply by submitting their CV online:

1. Log in on the CEPR hub online at https://hub.cepr.org/
2. Go to https://hub.cepr.org/event/4142
3. Click on "Step 1: Apply"
   Members of the MEF programme area, click on "Change registration details"
4. Complete the requested information and upload the required documentation: Applications without the required documents will not be considered.
   a. All applicants must submit a CV. *PDF or word document is preferred but the option to provide a link to CV is available.*
   b. PhD Students must include a supporting statement (max 300 words) specifying how the school will be useful for their current research.
   i. To do so click 'Would you like to submit additional files?'.
   ii. Upload PDF or Word Document.
   iii. The Supporting Statement must be in a document separate from the CV file.
5. Click "Submit Information".

Candidates who are not CEPR affiliated or do not have a CEPR profile should apply by submitting their CV online:

1. Create an online profile at https://hub.cepr.org/user/register
2. Log in on the CEPR hub online at https://hub.cepr.org/
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6. Click "Submit Information".

If you have any difficulty in applying please contact, Jemila Benchikh, CEPR Events Officer at **jbenchikh@cepr.org** for assistance, with the subject line '4142- EABCN Training School -Wolf - Mannheim, 2024'

About the Instructor:

Christian Wolf is an Assistant Professor of Economics at the Massachusetts Institute of Technology, and a Faculty Research Fellow at the National Bureau of Economic Research (NBER). He earned his doctorate at Princeton University. His research interests include macroeconomics, monetary economics, and time series econometrics.