

Seminar in Econometrics WS 2016/17

„Applied Business Cycle Forecasting“

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Aim of the seminar

The aim of the seminar is to apply modern forecasting techniques in a “true” business cycle forecasting situation as it is found in institutes, international organizations, or banks. Throughout, our example is the German economy.

Outline

Participants are grouped into one or two forecasting teams depending on the number of participants. Each team is in charge of developing a good business cycle forecast for the German economy. This includes more than just adding econometric forecasts of individual variables because the forecasts need to be consistent in terms of the national account identities and the “story” they tell.

During the summer break, each participant writes an academic seminar paper. The paper predicts a given macro variable (e.g., GDP, consumption, investment, exports, imports, inflation) with the help of some econometric forecasting methods. These methods should be described and evaluated with historical data using out-of-sample forecasting exercises. Based on the most promising method, the participant is expected to generate a forecast for this and next year. The term paper should consist of a text (max. 20 pages) that reviews and discusses the literature, methods, and results plus the data and software to replicate the empirical findings.

At the beginning of the semester, the participants present their forecasts in a group meeting. The presentation should stress the scientific approach of the forecast. A subsequent discussion aims to detect methodological shortcomings and inconsistencies between individual forecasts, and to find a common “group story”. Based on this discussion, a joint forecast document is drafted by each group and open issues are specified.

During the semester, there are additional group meetings to settle the open issues and integrate the individual term papers into a joint forecast report that should be understandable to people without econometric background.

At the end of the semester, each group submits their forecast report and presents the results in a joint meeting of both groups. This time, the presentation should be understandable to people without econometric background. A final discussion is intended to check the assumptions and economic story of each group’s forecast.

Educational objectives

The students will learn to

- acquire new econometric techniques from the literature,
- apply econometric techniques to an empirical question,
- relate their findings to the literature,
- use econometric software,
- present scientific results both to an academic audience and to the general public,
- critically discuss the results of others, and
- work in a group.

Structure of the seminar

1. While depending on the number of participants, we plan to group the participants in two forecasting teams. Each team is in charge of developing a good business cycle forecast for the German economy.
2. At the end of the summer semester 2016, each participant is assigned a macro variable to be predicted (e.g., GDP, consumption, investment, exports, imports, inflation) and some methods to be used. In the term paper, the participant is expected to generate a forecast for 2016 and 2017. Each model used shall be described and evaluated with historical data using out-of-sample forecasting exercises. The term paper thus consists of a text (max. 20 pages) that describes and discusses the literature, methods, results etc. plus the data and software to replicate the results. As this requires forecasting and programming techniques that may be new to some participants, there will be two *voluntary* tutorials during the summer break.
3. The deadline for the term paper is by the beginning of the winter semester.
4. By the end of October, there is a midterm presentation/group meeting. Each group presents and discusses the individual results with the aim to detect any inconsistencies and to find a common “story”. Based on this discussion, a joint forecast document is drafted by each group and open issues are specified.
5. In the following weeks, there is time to settle the open issues and integrate the individual term papers into a joint forecast report.
6. Before the Christmas break, there is a final group meeting to finalize the joint forecast.
7. In the week after the Christmas break, there is a block seminar (for both groups together) where the final results are presented and discussed.
8. In 2018, when the German statistical office releases the national account data of 2017 we will know which team made the better forecast. But grades will be given before. 😊

Important dates (preliminary: changes might be agreed upon in the first meeting)

Location: WSP7 - R.414 [SR StatÖko]

Friday, July 8, 2 pm:	First meeting: Introduction to the topic, registration (please also register by e-mail as described below), and assignment of variables to be predicted.
TBA (fixed on July 8):	1st tutorial
TBA (fixed on July 8):	2nd tutorial
Sunday, Oct 16, 12 pm:	Deadline for electronic submission of the thesis (text: pdf). An identical hardcopy version must be supplied in the subsequent meeting.
Wed., Oct 19, 2:15-4:30 pm	Midterm presentation/meeting of group 1
Wed., Oct 26, 2:15-4:30 pm	Midterm presentation/meeting of group 2
Wed., Dec 7, 2:15-4:30 pm	Final meeting of group 1
Wed., Dec 14, 2:15-4:30 pm	Final meeting of group 2
Wed., Jan 18, 2:15-5:30 pm	Presentation of the final results (groups 1 and 2)

Grading

The final grade consists of the following parts:

- Thesis (to be submitted on Oct 18): 50%
- Mid-term presentation: 15%
- Activity in group meetings: 10%
- Final forecast document: 10%
- Final presentation: 15%

How to register

You **have to attend** the first meeting of the seminar on **Friday, July 8, 2 pm**. Preferably before, but not later than **Monday, July 11, 12 am**, please additionally send an email to Mrs. Reinmüller (contact@stat-econ.uni-kiel.de) with the following information: full name, matriculation number, University e-mail address, program of studies, and semester. Please note: Your registration is complete **only** after you have attended the first meeting **and** sent the registration e-mail.

Prerequisites

- Econometrics I and II
- A course on forecasting techniques is recommended, in particular the courses “Applied Business Cycle Analysis and Forecasting” or “Multivariate Time Series Analysis and Forecasting”.

How the seminar integrates in your curriculum

This is a seminar in econometrics. Here are some details how it integrates in your curriculum. If you are unsure, please contact your student guide.

- Master in Quantitative Economics: this seminar can be one course in the Optional Section in Statistics and Econometrics or in the Minor Empirical Economics.
- Master in Economics: this seminar can be a quantitative replacement for a seminar in the Optional Section in Economics or in the Minor Empirical Economics.
- Master in Quantitative Finance: this seminar can be one of the courses in the Minor Empirical Economics.
- Master in Environmental and Resource Economics: this seminar can be a quantitative replacement for a seminar in the Optional Section in Economics.