

Course project

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The goal of this project is that you use real data to apply the techniques you have studied throughout the course. Also, it can be an opportunity to analyze other people's results from a critical perspective.

I suggest two types of exercises (but I am open to suggestions).

1. Formulate an economic question within your area of interest and carry out an empirical analysis trying to answer it using the time series methods reviewed in this course.
2. Select an empirical paper in your area of interest that uses time series methods and whose data is publicly available.

- Replicate (some of) the results of the paper, trying to extend the analysis (for instance, provide forecasts, compute impulse response functions, etc.).
- And, more importantly, try to analyze from a critical perspective the results provided in the paper. The idea would be to check how '*robust*' are the results to different methodologies/datasets. As we know, identifying a process relies on many aspects, not all of them completely objective (for instance, using the BIC versus the AIC, using a particular unit root test versus another one, using annual versus quarterly data, etc). In addition, as time goes by, more powerful techniques are introduced and new datasets are available. Application of these new techniques on the new datasets might confirm (or not) previous results.

Then, you should try to answer questions of the following type: do the results provided in the paper still hold when 1) different estimation strategies are adopted (this includes identification of the model, type of information criteria employed, etc.), 2) more recent techniques are used (for instance, more powerful unit root tests, use of alternative models), 3) other datasets are considered (data from other sources, referred to a different period, different frequency, etc.), 4) etc. (try to think on more key aspects that can have an impact on the results).

Some general guidelines:

- In either project, you can be as creative as you like.
- You can work in pairs or individually, as you prefer.
- A presentation of the project will take place on the last day of the course.
- The project is due by **June 22th**.
- Please send me the document by email: mayoralaura@gmail.com.

GOOD LUCK!!!