The study of econometrics has become an essential part of every economics program. This is because the importance of applied economics is constantly increasing, and the ability to quantify and evaluate economic theories and hypotheses constitute now, more than ever, a bare necessity. Applied econometrics work always takes as the its starting point a model or an economic theory. From this theory, the first task of the applied econometrician is to formulate an econometric model that can be tested empirically. The next tasks are to collect data that can be used to perform the test and, after that, to proceed with the estimation of the model.

After this estimation of the model, the applied econometrician preforms specification tests to ensure that the model used was appropriate and to check the performance and accuracy of the estimation procedure. If the tests suggest that the model is adequate, hypothesis testing is applied to check the validity of the theoretical predictions, and then the model can be used to make predictions and policy recommendations. If the specification tests and diagnostics suggest that the model used was not appropriate, the econometrician must go back to the formulation stage and revise the econometric model, repeating the whole procedure from the beginning.

Topic discussed:

1. Simultaneous equation models.
2. Limited dependent variable regression models.
3. ARIMA Models and box-Jenkins Methodology.
4. Modeling Variance: ARCH-GARCH Models.
5. Vector Autoregressive (VAR) Models and Causality Tests.
6. Non-Stationary and unit Root tests.
7. Cointegration and Error correction Models.
8. Panel Data Econometrics.

Course requirements.

Different economies data sets that are required for each topic.

Final examination