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Autumn 2018

Econometric Theory I

Computer Lab Class I

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Wednesday 12:00 - 13:00, C42 SCGB

About the lab sessions

Preliminaries

- Four computer classes.
- Sessions provide an opportunity for you to implement the econometric techniques studied in class using econometric software.

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Goals

- Learn how to perform empirical analysis.
- Get a taste of a very popular econometric software package.
- Improve statistical and econometric skills.

About the lab sessions

Why is this important?

- Interpreting results of an empirical analysis might be part of the exam.
- You may need to use regression analysis in your dissertation.
- Interpretation of an empirical analysis is sometimes part of the job application process.
- Collecting data and estimating models may be something you will do at work in the near future.

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$$y_i = \beta_1 + \beta_2 x_{i2} + ...\beta_k x_{ik} + u_i$$

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- We can use the method of Ordinary Least Squares (OLS) to obtain coefficient estimates for $\hat{\beta}_1, \hat{\beta}_2, ..., \hat{\beta}_k$.
- Ultimately, we want to learn about the statistical significance of those coefficient estimates by testing

  $H_0 : \beta_i = 0$ against $H_a : \beta_i \neq 0$ (more on this later) for $i = 1, 2, ...k$.

What you you will see today

How do we actually do this?

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  where

  - $\texttt{earnings}_\texttt{i}$: earnings of individual i in USD per hour,
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- We would expect to find a **positive and significant** effect of `educ` and `workexp` on `earings`.

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- Launch Stata.
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- View data (plots) and summary statistics.
- Estimate and interpret results of the regression:

$$\texttt{earnings}_{\texttt{i}} = \beta_1 + \beta_2 \texttt{educ}_{\texttt{i}} + \beta_3 \texttt{workexp}_{\texttt{i}} + u_i$$

- Test for significance of coefficients.

Thank you and see you next time!

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