Data Analysis in Accounting and Finance

M.Sc. in Accounting and Finance

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1. Useful information

- **Personal information**
  - **Lecturer:** Leonidas Rompolis
  - **Office:** 12 Derigni street, 6th floor (near the main building of AUEB in Patission).
  - **Office hours**: Monday 11.00-13.00
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- **Course information**
  - **Sessions:** 8 X 3 hours each (every Monday 18.00-21.00) + 4 X 2 hours each tutorials
  - **Course assessment:**
    - 3 hours final exam (75%).
    - one *compulsory* group project (25%). The project count for the final grade given that you have obtained a pass mark (50%) in the final examination.

2. Aims and objectives

- This course can be considered as an introduction to **Econometrics**.
- Its aim is to present the basic theory of Econometrics and how this can be rigorously applied to a variety of problems arising from Accounting, Finance, Economics, and Business Administration.
- The course will make it possible for participants:
  - To acquire a clear understanding of the basic tools of econometric analysis and how to apply them in practice in order to reach valuable conclusions on a variety of problems.
  - To be able to conduct an independent econometric analysis. This is particularly important for their *master thesis*.

2. Aims and objectives

- On completing the course participants will be able to:
  - Construct an econometric model, estimate its parameters and conduct statistical inference on them.
  - Examine the adequacy of the model and its goodness-of-fit.
  - Generalize the original model, if necessary, in various directions.
  - Use the model to obtain predictions of key economic and financial variables.
  - Understand the notion of heteroscedasticity and autocorrelation and how these two properties can be modeled (or taken into account) when conducting an econometric analysis.

3. Topics covered

1. Introduction to Econometrics
2. The simple linear regression model
3. Inference on the simple linear regression model
4. Further inference on the simple linear regression model
5. The multiple regression model
6. Further inference on the multiple linear regression model
7. Using indicator variables
8. Heteroskedasticity
9. Regression with time-series data

4. Reading materials

- **E-class**:
  - Slide presentations
  - Multiple choice questions in class
  - Tutorial material (exercises, solutions, data and EViews programs)
- **Books:**
  - *Griffiths, Hill and Lim, "Principles of Econometrics", 5th edition, Wiley.*
  - Wooldridge, "Introductory Econometrics: A Modern Approach", 6th edition, Cengage Learning.
  - Gujarati and Porter, "Basic Econometrics", 5th edition, McGraw Hill.
  - Vogelvang, "Econometrics: Theory and Applications with EViews", 1st edition, Prentice Hall.