Econometrics Project

General rules

Deadlines

1. Submission of groups participants and topic (editing the shared document): **9th of March**.[1]
2. Preliminary project presentation and questions **9-10 April** (**online** during lecture hours).
3. Delivery by email to Michele.Azzone@polimi.it and Edoardo.Sala@polimi.it cc-ing all the group components: before the **15th of June by 11 pm**.
4. Upload on the Google form the project slides and the slides for the discussion: **21st of June 11 pm**.[2]
5. Project discussion: **23th of June**. Room tbd.

Preliminary presentation

- 5 minutes strictly only one speaker per group.
- 5 slides, 1 to describe the dataset and 1 to discuss what is your aim (research question/methodology/literature), 3 to present preliminary results.
- You will share the slides within the call. A schedule for the presentation will be made available.

Presentation

- 10 minutes (strictly) presentation (slides).
- 2 minutes discussion by adversarial group (the role of the discussant is explained below).
- 10 minutes questions (maximum 2 minutes for each member of the group).

Discussion

- Each group will be assigned as a discussant/adversarial of another group.
- The discussants will receive the material of their adversarial group on the 14th of June.
- The discussant have to prepare two slides: one summarizing the main result of the adversarial group and another with a question that is linked to a weakness, a mistake or in general a problem observed in the material of the adversarial group (e.g. a check for iid residual is missing, an assumption is wrong, there is a major problem in how conclusion are drawn...). Additional information on how to prepare the discussion will follow.

[1] Groups that have not registered by this date will not have the possibility to deliver the final project this year.

[2] Submission via email will not be taken into consideration

Michele Azzone and Edoardo Sala.

Points

- 1 point preliminary presentation.
- 4 points for document and code.
- 3 points for presentations.
- 3 points for answer to questions (can be differentiated among group members).
- 1 point for the discussion (to the discussant group).

Michele Azzone and Edoardo Sala.

Here you can find some general rules to keep in mind:

1. Create a group of 4 students.
2. We will propose a number of dataset for the final projects (slides will be uploaded on we-beep).
3. You can select one of the proposed dataset or decide to work on a topic you are interested in. Study the related literature and find a paper's methodology to follow. Data can be found on several sources (OECD, World Bank, ECB Data Warehouse, Yahoo Finance, ...). The best approach is finding a paper with public data to reproduce (or with similar data available).
4. Once you have decided your topic, write the components of your group and the topic on the Excel file. Maximum 2 groups can work on the same topic. The link to the excel file will be added soon on WeBeep.
5. The final project should have at least the following sections:
    a. *Introduction and Literature Review*: where you explain the main question(s) and the economical framework and briefly analyse the most recent works on the topic. Maximum 1/2 pages.
    c. *Data and Methodology*: where you present your dataset (where you got it from, how it is composed, ...) and the mathematical framework of your project. Maximum 3 pages (focus more on dataset description)
    d. *Results*: where you present and analyse the outcome of the experiment.
    e. *Conclusion*: where you wrap up briefly the main contents and results of the work.
    f. *Bibliography*: where you collect all the scientific works that you have cited.
5. Deliver all the data the code and the document in a zip file called "Group#.zip" via email (the quality of the code and comments on the code will also be evaluated).
6. Maximum 10 pages per document.
7. The project will be valid for the entire year (till the last exam of the 2023/2024 winter session). Project for this year can be discussed only on the 25th of June 2023.
8. You can use the same dataset for projects in applied statistics and nonparametric statistic but you should inform all the professors and the techniques used **should differ**.

Here you can find addional examples of suggested topics for standard projects, you can propose your own topic in the excel file:

1. Economic development and Co2 emissions
2. Crude oil price dynamics
3. Oil and gold price on economy prices
4. Productivity growth and inflation

Michele Azzone and Edoardo Sala.

5. Stock market volatility modelling
6. Implied volatility indices, causality against macro economic factors
7. Exchange rate affection on import flows
8. Relationship between GDP and energy consumption
9. CO2 emissions and renewable energy consumption
10. Income inequality and household debt
11. Oil price and exchange rate
12. Exchange rate volatility and monetary policies
13. Migration and labor markets
14. Relation between unemployment and inflation
15. Structural breaks in inflation
16. House prices and demographic dynamics
17. Stock prices and demographic structure
18. Government debt on private consumption
19. Economic growth and public debt
20. Bank lending in euro area
21. Credit risk (CDS, Bonds, MBS).
22. Green Finance (ESG ratings, green bonds).

Michele Azzone and Edoardo Sala.