

I GROUP ASSIGNMENT

Group composition

You are free to determine the composition of your group, composed of a maximum of 4 people. Smaller groups are admitted. Projects carried out by one student alone are allowed only in exceptional cases.

To [register your group](#), go to the course page on Blackboard under 'Assignment Group I', where you will also upload your presentation.

Make sure to finalize your group members before registering.

If you have difficulty finding group members, you may contact the instructor at deana.gabriele@unibocconi.it.

Deadline for group composition is Friday 7 March.

Structure of reports and rules

- You will create a STATA script with the code running your analysis and a short slide presentation (max 6 slides) listing your econometric model, the data used, results, interpretation of results and conclusions.
- Each group is required to upload only one PDF document. This document should contain the entirety of the group's report. Only one member of the group needs to upload the document for all group members.
- Remember to comment clearly and briefly what you do and the results in the script. If you use additional packages, provide a brief explanation of what they do exactly.
- The document has to be named as: *Group group#.pdf*

Example: If your group is number 5, the file name must be: **Group5.pdf**

Deadline: Tuesday 25 March, at 11:59 A.M.- Late submissions will not be accepted.

It must be uploaded in the "Assignment I" folder, in your corresponding group.

Grading and Bonus Points:

- Each group assignment is **optional**.
- Completing an assignment can earn your group up to **1.5 bonus points**, which will be added to the evaluation of the corresponding part of the course:
 - The **first** assignment provides up to **1.5 bonus points**, which will be added to the evaluation of the first part of the exam.
 - The **second** assignment provides up to **1.5 bonus points** for the second part of the course.
- The **maximum** total bonus points that can be added to the final grade is **1.5**.

Topic for the group assignment

This assignment should be an empirical application of the methods learnt in the course. You can work on your own ideas or follow the sample topic described below; the same evaluation criteria will be applied to the two options (none of the options will be penalized).

You can start from describing a relation of interest between a variable y and some explanatory variable x , and formulate some hypothesis you want to test. Then you can estimate a simple regression model including only the explanatory variable x and test the hypothesis of interest, describe results and discuss why this simple model can be unreliable. Then you can consider a multiple regression model that you find more suitable, present and interpret results appropriately.

For the analysis, use cross-sectional data publicly available. Good data sources include the World Bank ([World Bank Open Data | Data](#)), the IMF ([IMF Data Home Page - IMF Data](#)), Eurostat ([Database - Eurostat \(europa.eu\)](#)), the OECD ([OECD Data](#)), but you can also use data from other sources. In any case, make sure the sample size is large enough (no less than 50 units, remember that estimates become more accurate when the sample size increases). Provide descriptive statistics for the data used in the second section.

Sample Topic – Barro-style Regression

“Barro-style regression” refers to a type of growth regression analysis that became popular in the 1990s. It draws upon both transitional dynamics (including the speed of convergence) and steady-state aspects of neoclassical growth theory, such as the Solow model. A key hypothesis that this type of analysis seeks to test is the P-Convergence hypothesis, i.e. the tendency for poor countries to grow faster than rich countries (Barro and Sala-i-Martin 1992, “Convergence”, *Journal of Political Economy*, vol. 100, 223-251).

The relationship you want to analyze in this case is therefore the one between the level of output (GDP-per-capita) of an economy at some point in time and the subsequent rate of growth experienced by that economy. You can find the data necessary for this type of regression in the Penn World Table ([PWT 10.01 | Penn World Table | Groningen Growth and Development Centre | University of Groningen \(rug.nl\)](#)). After estimating the simple regression, discuss why the model is too simplistic, and propose and estimate a multiple regression model that you think is more reliable.