# EFC Spring School Group Projects

## **General structure**

* Students are divided in nine groups of 4, and one group of 5
* Each group will deliver an 8 minute presentation based on the results of the analysis conducted during the group work
* Data and research questions to choose from are provided to each group
* Groups are allowed to merge the data provided by us with external sources, based on their needs (such as World Development Indicators, Penn Tables, etc.)

## **Datasets**

*[You can choose one or more datasets, depending on the research question. Datasets can be used also for specific subsets]*

* Products: UN Comtrade
* Employment: Eurostat’s Structural Business Service data
* Science: Open Academic Graph, Scimago
* Patents: Regpat
* GDP, CO2 emissions, GHG emissions, Gini Index: World Development Indicators

The data can be retrieved from the “data” subfolder in your group folder on Google Drive.

## **Proposed research questions**

*[Choose one of the options below or pick any possible combination of the following, or come up with your own research question and discuss it with us]*

1. How does the structure of productive / technological / scientific capabilities relate with a country’s environmental sustainability?
2. How does the structure of productive / technological / scientific capabilities relate with a country’s income inequality?
3. How do technological capabilities predict the entry of countries into specialisation in green (or other specific classes of) products?
4. Which specific combinations of academic research and technological fields are more important for competitiveness in the automotive/energy/professional service sector?
5. How are European countries equipped for the digital and/or green transition in terms of environmental and ICT technologies?
6. How does the structure of productive / technological / scientific capabilities can help us forecast economic growth?
7. How is industrial relatedness associated with future growth paths?
8. Which trajectories have countries followed in terms of productive / technological / scientific capabilities and how can middle-income economies follow successful specialisation paths on the basis of their pre-existing competences?
9. What are the most likely sectors / products / technologies of a country in 5 years, based on their existing productive / technological structure?
10. Based on their productive / technological capabilities, what are the most viable trajectories for low-income countries to diversify and upgrade their productive / technological structure?

## **Presentation roadmap**

Students can present either a Jupyter Notebook or slides (based on [this pptx template](https://docs.google.com/presentation/d/1f2AlqxZbP_1U5yn90XSyu1yrakYkMFjeyctpMAmR2NM/edit?usp=sharing) or on this [beamer template on overleaf](https://www.overleaf.com/read/pfwhbtmwbrpx)). Structure to be organised as follows:

* Introduction (clearly state your research question and hypothesis)
* Literature review (provide a list of references relevant to the topic you chose and specify how does the analysis talk to that literature)
* Descriptive statistics of the data (give us an idea of your sample, timeframe, main trends and patterns)
* Analysis (present the results you have prepared to answer to your research question and check if your initial hypothesis was correct)
* Discussion of results (discuss your results, their validity, limitations and possible policy/societal implications).

## **Groups**

Group 1: Andrea Musso, Luca Bonamico, Giacomo Zelbi,Cecilia Seri

Group 2: Oriol Gisbert, Anna Hillingdon, Zebulun Kreiter, Nishanth Kumar

Group 3: Giulia Occhini, Giuseppe Simone, Johannes Lumma, Federico Riccio

Group 4: Max Sina Knicker, Mirella Schrijvers, Gianluca Risi, Irene Di Ciommo

Group 5: Livia Ristuccia, Giulia Iannone, Marcia Ferreira, Vieri Calogero

Group 6: Francesca Centofanti, Mario Alberto Macchioni, André dos Santos Souza, Sneha Pemalaputhen Marydas

Group 7: Fabrizio Colantoni, Cristina Pinheiro, Simone Daniotti, Quinten De Wettinck

Group 8: Matteo D'Alessandro, Charlotte Bez, Ebba Mark, Karthika Baby Sujatha

Group 9: Yongyuan Huang, Damon Aitken, Emanuele Calò, Anna Snaidero

Group 10: Pietro Corsi, George Paily, Federico Musu, Florian Hack