# Big Issues Economics in Economics and Finance

## Coursework: Group Assignment 2025

## *International Trade, Growth and Inequality*

This group assignment aims to give students the opportunity to use the concepts and methods explored in Lectures 1 to 5, in order to produce a comparative descriptive analysis of trade, inequality and growth in two countries, using data from the World Inequality Database. This dataset was used in **Lecture 2** to replicate results from *Piketty, Thomas. Capital in the twenty-first century. Harvard University Press, 2014*. The *R* code used for that is available from the Lecture 2 folder in Insendi.

Each group has been randomly allocated a pair of countries. The task of each group is to conduct the analysis described below for the two countries assigned and to present the findings of this analysis on 27 and 28 November 2025. The presentation slides and *R* code used for the analysis are to be submitted in advance of the presentation (by 10:00 noon 24 November 2025).

### A. Objectives

Each group will use WID data for the two countries assigned to conduct the following analysis:

1. Visualize, describe and compare the evolution of income inequality and wealth inequality in the two countries (for the years for which data are available) using the programming language *R*. **[10 marks]**
2. Compare and contrast inequality for each country relative to the wider region (South Asia, Central America, MENA, etc) **[10 marks]**
3. Use *R* to assess the correlation between inequality (in income and wealth) and income growth. Groups should discuss reasons why ascertaining a causal nexus between these variables is difficult. **[20 marks]**
4. Use R to analyse the correlation between international trade and income inequality, and international trade and income growth for the two countries. **[15 marks]**
5. Some international Trade theories predict that international trade increases wage inequality in countries. Does your answer to Question 4 support this hypothesis? Use additional information to explain why we do/do not observe a positive correlation **[20 marks]**
6. With reference to your earlier answers on GDP and income/wealth inequality, suggest how these countries should response to increasing tariffs from the US government **[15 marks]**
7. Briefly discuss the limitations of the analysis. **[10 marks]**

## B. Deliverables

### A. Presentation materials

Slides and R code to be submitted by **10:00 noon 24 November 2025**. The number of slides included in the presentation should not exceed 16 (including the title slide) and the number of graphs should not exceed 10.

### B. Presentation

Each group presentation will present for 10 minutes, followed by approximately 5 minutes of discussion, with questions from the *module leader*, the *tutorial leader* and assigned discussants (further details below).

Presentations should be delivered by 2 or 3 members of each group – it is up to each group to choose which members will deliver the presentation. The remaining 1 or 2 members of the group, who do not deliver the presentation, will take an active role as *discussants* of another group's presentation (this is described below).

Presentations take place on **27 and 28 November 2025**.

### C. Discussion

Each group presentation is followed by approximately 5 minutes of discussion, with questions from the module leader, the tutorial leader, and members of another group who will serve as *discussants*. Discussants are randomly allocated the discussion of the presentation delivered by another group. They will be provided with that group's presentation slides shortly after these are submitted to the Programmes Team.

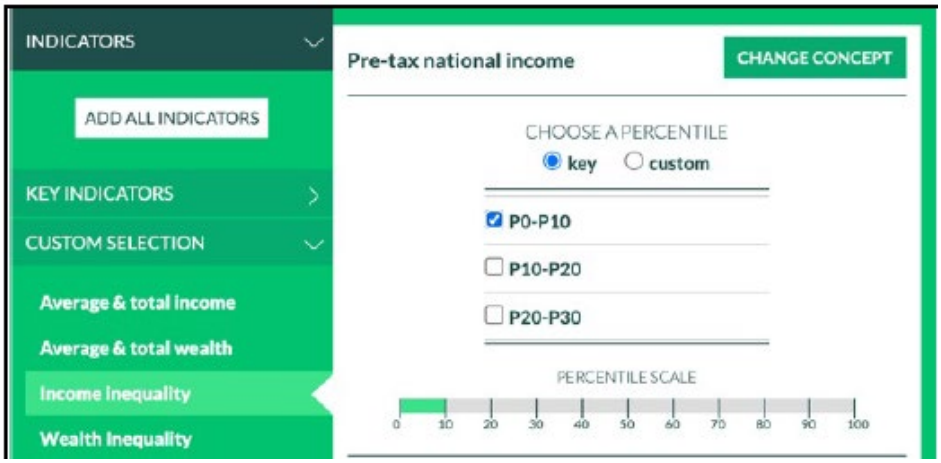
Discussants should review the slides and analysis of the group they have been assigned and come up with one or, time-permitting, at most two questions to pose to the group presenters on the day of the presentation. The pertinence of such questions will be assessed and will contribute towards the overall mark attained by the discussants' group.

## C. Data

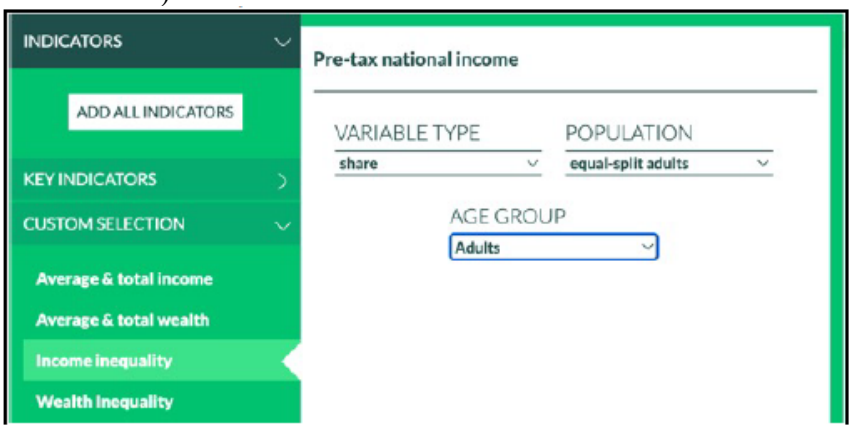
All the data required for this assessment can be found in the World Inequality Database (WID) .

The first step is to construct the dataset that will be used in the analysis. The WID provides a very convenient way of doing this, using its own data selection tool. Start by using that tool to select the required **variables**. For example, one would use **custom selection** to choose **income**

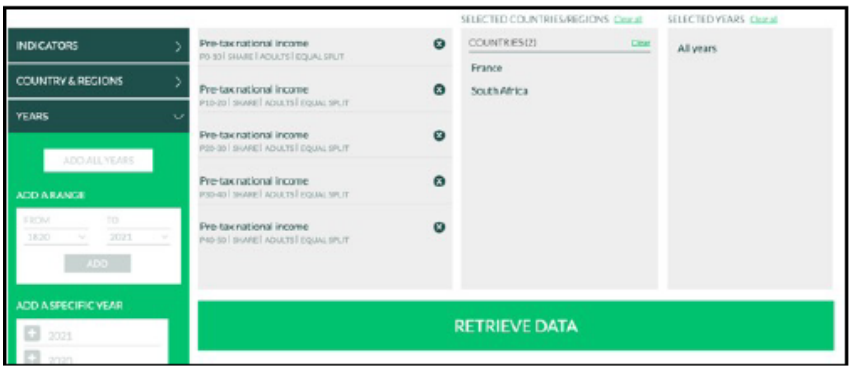
**inequality** (which defaults to **pre-tax national income** as an indicative concept) and then select the ***P0-P10*** decile group.




Clicking **next**, we are prompted to further customise the desired data. For example, we might specify the **variable type** as ***share*** to obtain share of income. For the **age group** and **population**, one can select ***adult*** and ***equal-split adults*** (this age group/population is best represented across all countries).




Clicking **OK**, one can then repeat the process for the other decile groups (or any other desired indicators). One can add up to **five** variables at a time. Once these are added, one selects the **countries** and **years**.




Click **retrieve data** and you will be presented with a preview of your data.

We *highly r*ecommend that you **change table structure**, choosing the tidy format (a single row, where each column is only one variable).


Also recommended is the ***CSV*** file format, so one can load data using the read.csv() function.

Since one can only retrieve **five** variables at a time, there will be some data cleaning required to combine the downloaded data. Consider the *bind_rows()* function or similar to support this process.

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After downloading the required data, unzip the CSV files to a new folder on your computer. To keep things straightforward, always place your CSV files in the same folder as the R Notebook (.Rmd file) containing your code. In **RStudio**, open your R Notebook and point to the file with the read.csv() function. For example,

```
wealth_deciles_1_5 <- read.csv("WID_Data_02112023-195006.csv")
```

Once the dataset is constructed, one can start conducting the analysis of points 1 to 6, described above (Section A). The data visualisations using *R* we saw in Lecture 2 can be useful at this stage (despite the countries and the purpose of the analysis being different).

## D. Support in the completion of the coursework assignment

Over the period leading to the completion of the assignment, support is available during the module leader and tutorial leader's office hours to discuss the economics / finance involved in the assignment.

## E. Marking and feedback

Marks and written feedback will be provided to each group shortly after the presentation. Please note that this coursework assignment is groupwork, so each member of the group is expected to receive the same mark. However, individual students' marks may be individually adjusted if necessary (for example, if they do not contribute to the group project adequately).

The marking scheme is described in Section A. For each of the 7 sub-tasks we will assess:

- Quality of the analysis. Are the facts (trends, correlations, etc) correct and is the interpretation of these facts adequate? Are the hypotheses raised logically coherent? Are the policy suggestions sensible?
- Clarity of the presentation: are the slides clear? Are they presented clearly? Are all the members of the group able to answer questions effectively? Are the questions asked to other groups sensible?
- Group cooperation: did the group work collaboratively and cohesively to complete the task?

**F. FAQs**

- The use of generative AI (for example, ChatGPT) is permitted, encouraged and can be helpful in the coding aspect of the task. However, this needs to be fully declared: if you use this tool, please add a Word document to your submission indicating all your AI prompts and explaining how you used them (what, for what purpose, results obtained). Undeclared use of generative AI is tantamount to academic misconduct. Declared use is fine.

- References: it is important to cite all academic work referenced in your slides. Any standard referencing style is fine, provided that this is used consistently throughout the assignment. References should be listed in the last slide of the presentation (and will not count towards the slide limit)

- It is part of the assessment to work collaboratively within your groups. If any group has concerns about *free riding* they should reach out to the module leader as soon as possible.