World Economic Inequality Visualization Project: Information Visualization

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Introduction

- Overall aim: Provide a visualization of a subset of the World Inequality Database
- Tools: D3Js v4.0, D3-Queue, Bootstrap v4.0
- **Solution:** An interactive graph composed of: a world map and 3 charts. When selecting a country, the charts are updated.

Full view of the visualization

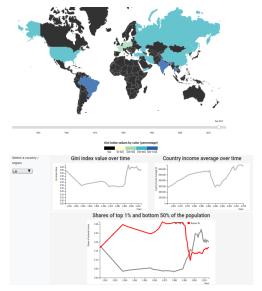


Fig 1: The proposed visualization.

First part: Map

Map provides several interaction possibilities:

- Slider, to go through time and select specific year,
- For different years, countries have specific colors based on the value of Gini index for that year (encoding of colors: legend below the map),
- When the cursor is on a specific country, a text pops up with the name and population of that country



Charts

Based on the specific country chosen, either by selecting from the map or from the "Select a country/region" list, the three charts update correspondingly. E.g for France selected from the select list:

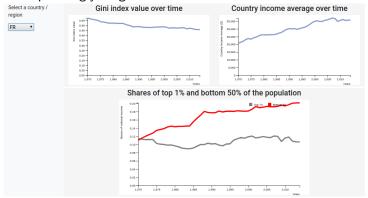


Chart 1

For a specific country chosen, the first chart shows the Gini Index Value over time.

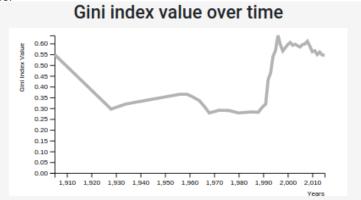


Chart 2

For a specific country chosen, the second chart shows the country income average over time.

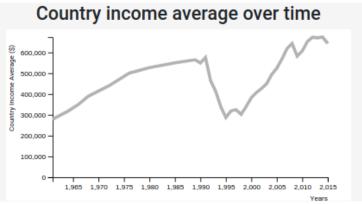
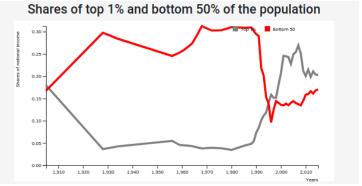


Chart 3

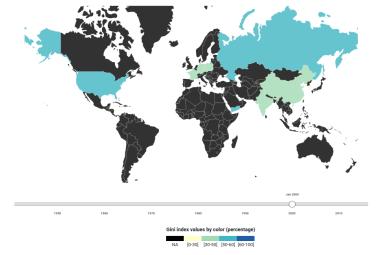
For a specific country chosen, the first chart shows the shares of top 1% and bottom 50% of the population



Note: A special data preparation (given in details in the report) had to be done to group the population into those two groups because it wasn't available in the given dataset.

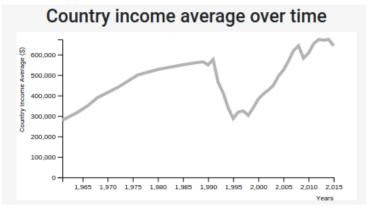
Question 1: Which were the countries with the biggest GINI index in January 2000?

- First, set the slider at January 2000,
- Based on the legend and map, the answer is: Russia, USA and Yemen



Question 2: What is the evolution of income average for Russia over the years?

- First, select Russia in one of either two options,
- Look for the answer at Chart 2



Question 3: How do we compare the share of income between top 1% and bottom 50% of population for France?

- Select France in either of two ways,
- Conclude from Chart 3: bottom 50% has portion of income.

