ESCI upf. International Business

P4 | Interactive and dynamic data visualization

First steps with `shiny`

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Session content

- Solving doubts
- Exercise: Interactive and dynamic visualization: first steps with `shiny` (`P4_exercises.Rmd`)
- Group project: part C

Practice

Interactive and dynamic visualization: first steps with `shiny`

- Open the document `P4_exercises.Rmd` in RStudio and complete the exercises.
- Upload the completed document to Aul@-ESCI at the end of the session.

Project

Group project

Parts

- **Part A** | Understand the origin of our data set and the meaning of the variables
- **Part B** | Visually describe our data set
- **Part C** | Add interaction to

Project

Group project

Part A

- Describe your data set:
  - Where and why was the information collected?
  - Which is the meaning of each variable?
  - Do the variables have unit? Which one?
  - Does the data set have a long format?

Project

Group project

Part B

- Write the code to:
  - Read it into R
  - Reshape the data if necessary into long format
  - Check the variable classes and update them if necessary
- Explore your data using `ggplot2` graphics
  - Represent the **distribution of the variables**: pick one continuous variable and one discrete variable and use histograms or bar graphs to show their distribution
  - **Summarize the data**: use one geom to summarize data (e.g.: `geom_smooth`, boxplots, ...) of two variables
- Explain your data with graphics and text
  - Choose the **three graphics** that better describe your data
  - **Customize** and **annotate** them
  - Accompany the figures with your **hypothesis** and/or **interpretation**

Project

Group project

Part C

- Make your figures interactive in three different ways (one for each figure):
  - Make an interactive visualisation using some `htmlwidget`
  - Add **interactive controls** with `shiny` input widgets to show some useful information (eg. focus on a subset, add a summary layer...)
  - Make an **interactive visualisation** using `shiny` built-in interactive options in order to print the information of the individual observations
- Decide which figure would benefit from each type of interactivity and justify your choice

Add everything (**tidy**) to the initial `R Markdown` document and **submit it before the next practical session** (one per group).

Project

Group project

Part C

Complete `shiny` apps within R Markdown

- A. `eval = FALSE` to render the R Markdown as plain html without the shinyApp
- B. `eval = TRUE` AND `runtime: shiny` at the YAML to run the shinyApp embedded into the R Markdown