Computer Assignment 2

Start Assignment

Due 30 Apr by 18:00 **Points** 10 **Submitting** a file upload
File types pdf, xlsx, and xls **Available** 9 Apr at 12:00 - 30 Apr at 18:00 21 days

- There are two computer assignments; this is the second one.
- You are advised to use Excel for analyzing the data and making graphs.
- Moreover, as always, Google is your friend for technical questions.

Guidelines – if these are not followed your assignment cannot be graded

- **What to hand in and when**: make a PDF with your answers + an Excel file (see question 1c) and submit themby Friday, April 30, 18.00.
- **Document contents**: at the beginning of the document it should be clearly stated there what it is, who made it and any additional specifications of the topic. The pre-amble (first few lines of the document) should thus contain, in this order:
- Assignment number
- Group number
- Assigned country
- Your names + ANR + SNR
- **File name**: when naming the file, think about the recipient of the file (in this case me), not about yourself. I don't want to receive 30 files named Macro2.pdf, or Assignment2.pdf. A correct file name should include the content of the file (here: Macro2-Assignment2 or Assignment2), the group name and the last name of the author. In this order, e.g.:
  - "Macro2-Assignment2-Group10-Jansen-Jones-Jimenez.pdf".
- **Word limits**: these are not indicative; they are binding. If you use more words than the maximum, you risk not getting any points for your answer.
- **Font size**: text should be large enough to read. Guidelines:
  - Use a simple, easy to read font like Calibri or Verdana
  - Not smaller than 9pt, not larger than 16pt.
- **Graphs**: should have a title, axis labels and a legend. Make them not too small, but also not too large so they take up a whole page. Guidelines:
  - Label both the x- and the y-axis.
  - Make a legend if you have multiple lines or bars, and give the series proper names.
  - Graphs should not be smaller than 1/3 of a page, not larger than half a page.
  - Label, label, label [I cannot stress this enough].
- **Page numbers**: number the pages in your document. Simple. This makes it much easier to talk about some part of your text/report, I could e.g. say the second paragraph on page 4.

- **Readability/printability:** make sure that the lines are discernible, so don't use dark blue and black, or red and orange next to each other; these are not sufficiently contrasting. Even better: make them readable in grayscale. You can achieve this by using different lines (solid, dashed, dotted, etc.) or using symbols on lines (diamonds, bullets, squares, etc). Bottom line: use contrasting colors and/or different line types.
- **Good luck!**

Question 1 (3 points - 1 per subquestion)

Go to either the OECD at **https://data.oecd.org/** **(https://data.oecd.org/)**, World Bank at **https://data.worldbank.org/** **(https://data.worldbank.org/)**, IMFat **https://www.imf.org/en/Data** **(https://www.imf.org/en/Data)**, St. Louis Federal Reserve FRED at **https://fred.stlouisfed.org/** **(https://fred.stlouisfed.org/)** or Eurostat at **http://ec.europa.eu/eurostat/data/database** **(http://ec.europa.eu/eurostat/data/database)**. Take one data source as your base source, and if this does not have all data for your country you can resort to one of the others.

Download the following data (time) series:

1. Current account balance as a % of GDP
2. General government debt as a % of GDP
3. Interest rate on government bonds (10 year), also called "Long term interest rate", in %/annum
4. Exchange rate against the US dollar
5. Total GDP, in millions of US dollars
6. Investment (usually Gross Fixed Capital Formation), in millions of US dollars
7. Gross national savings as a % of GDP (savings rate)

Instructions for choosing the series:

- Download the above mentioned data only for "your country". No need to download this data for the US as well.
- Download quarterly time series. If these are not available, download yearly.
- Take at least 10 years of data (more is better) up until the latest available year or quarter, which is most likely 2018-Q4.
- If your assigned country does not have a sufficiently long history, it can be shorter than 10 years; please indicate this in your answer.
- **Important**: you may have to look in different databases to find all the series. Sometimes, variable series may be very short or not even available at the above mentioned sources; you are then invited to take a further look for comparable series at other sources. As long as you have series that you can plot in a graph and that allow you to answer the questions below.

Then do the following (1 point per subquestion)

1. *Present the time series of all variables in one table per frequency: one for quarterly variables, and the other for yearly ones. Two tables in total.*
2. *Each variable should be in one column, and each table should fit on one page.*

3. *Put them on the first page of your answer file and provide an Excel file.*

Question 2 (4 points - 1 per subquestion)

Use the dataset you have created to answer the following questions:

1. *Plot government debt and the interest rate in two graphs and put them next to each other (if you know how to plot both quarterly and yearly data in one graph, you are welcome to do so). Do they move together, or not? Explain their development over time and (lack of) co-movement in economically intuitive terms. (50 words).*
2. *Do the same for the current account and the exchange rate. Do they move together, or not? Explain their development over time and (lack of) co-movement in economically intuitive terms. (50 words).*
3. *What macroeconomic events and/or policy responses related to your assigned country can explain both the development of debt & interest rates and the current account & the exchange rate? If you want, you can provide a few references (not Wikipedia). (75 words)*
4. *Is your assigned country in a currency union, or does it have a currency peg (Google is your friend here)? What does this mean for its policy possibilities to remedy large current account imbalances? (50 words)*

Question 3 (3 points - 1 per subquestion)

Use the dataset you have created to answer the questions below. Note: these are about chapter 20, which will be treated only after the computer lecture. But you can take information from the book and lecture slides!

1. *Calculate the investment rate as a % of GDP, and then provide a table with the resulting time series. Add this series to the Excel file you made for question 1.*
2. *Plot the savings and investment rates (both in % of GDP) in one graph.*
3. *Do you see any evidence for the so-called Feldstein-Horioka puzzle (home bias), or has it disappeared over time? (50 words)*

Country list

Group	Country assigned
Group 1	Argentina
Group 2	Australia
Group 3	Austria
Group 4	Bangladesh
Group 5	Brazil

Group 6 Canada
Group 7 Chile
Group 8 China, PR
Group 9 Colombia
Group 10 Czech Republic*
Group 11 Denmark*
Group 12 France
Group 13 Germany
Group 14 Iceland
Group 15 India
Group 16 Israel
Group 17 Japan
Group 18 Korea
Group 19 Mexico
Group 20 Netherlands
Group 21 Norway
Group 22 Peru
Group 23 Portugal
Group 24 Romania
Group 25 Russia
Group 26 South Africa
Group 27 Sweden*
Group 28 Switzerland
Group 29 Thailand
Group 30 Turkey
Group 31 United Kingdom
Group 32 Uruguay