

ADS1 exercises – Pandas and plotting

1. The csv file `countries_top10.csv` contains information on the population, area (in km²) and GDP (in dollars) for the ten most populous countries.
 - (a) Read the file into a pandas dataframe.
 - (b) Calculate new columns with the population per km² and the GDP per head. Write the dataframe into an excel file.
 - (c) Produce a scatter plot (i.e. using symbols/markers) of population vs. GDP with labels and title. Change the font sizes of labels and title.
2. The excel file `countries_top10.csv` contains historical GDP data (in inflation corrected dollars) of the top four economies. Read the file into a dataframe. Produce a plot of all four time series. Include a legend identifying the countries. Use different line styles (dashed, dotted, solid, dash-dotted) for each country. And label the axes, of course.

Many of you will already be aware that the lecture notes contain blueprints for your practical work.