Data and Information Management for Business Analytics – RSM312

Group Assignment 3 Due date: see Quercus

Deliverables (to be submitted on Quercus):

1. Case Report showing all the graphs required and answering the questions below.

2. All Python source code either in a Jupyter Notebook (*.ipynb) or a Python file (*.py). *One* file!

Use the provided data sets OECD_Trade.csv and OECD_GDP.csv to study Exports, Imports, Net Exports (defined as Exports – Imports) of countries to/from other countries, and GDPs of these individual countries.
Hint 1: Ensure that all your graphs are properly labelled.
Hint 2: To plot a legend outside of the chart, you can use
`plt.legend(loc='center left', bbox_to_anchor=(1, 0.5)).`

Task 1:
Briefly explore the data sets (no visualizations required) and describe your findings. Make any adjustments to the data sets as needed.

Task 2A:
i. Create a line chart showing the total annual import and export of all countries combined for each year from 2010 to 2018.
ii. Create a line chart showing the total net export of all countries combined for each year from 2010 to 2018.
iii. Create a line chart showing the total GDP of all countries combined for each year from 2010 to 2018.
iv. Do you detect any anomalies in the GDP chart? If so, what might be the cause?

Task 2B:
i. Using the annual summaries you created in the previous part A of this task, create six scatterplots, pairwise, of the measures export, import, net export and GDP.
ii. Briefly describe the scatterplots.

Task 3:
i. Create a stacked area chart, a stacked bar chart, and a normalized stacked bar chart showing the total annual export for each country for each year from 2010 to 2018.
ii. Repeat the above three charts for import.
Bonus: Can you assign a different color to each individual country?