Story of analysis - IMF dashboard analysis

Max Franke

April 28, 2020

Course: CIS-546 DATA VISUALIZATION

Term: Spring/T2

Data: The IMF publishes a range of time series data on IMF lending, exchange rates and other economic and financial indicators.

Approach of the analysis

This analysis aims to visualize the collected data to create a dashobard which shows the data in a structured and visualized way.

First, the data is collected by calling the API for IMF (package: 'imfr':

https://cran.r-project.org/web/packages/imfr/imfr.pdf)

Data presenation

In this section the data in its raw version is presented.

Table 1: Extract from the full data set (not all variables)

Country	Subject.Descriptor	X2010	X2011	X2012	X2013	X2014
Afghanistan	Gross domestic product, constant prices	362.857	386.368	440.336	465.358	477.909
Afghanistan	Gross domestic product, constant prices	8.438	6.479	13.968	5.683	2.697
Afghanistan	Gross domestic product, current prices	711.759	836.222	1,033.59	1,116.83	1,183.04
Afghanistan	Gross domestic product, current prices	15.325	17.89	20.293	20.17	20.616
Afghanistan	Gross domestic product, current prices	44.323	48.18	55.963	60.181	62.948
Afghanistan	Gross domestic product, deflator	196.154	216.432	234.728	239.993	247.545

Table 2: Head of transformed data with GDP

WEO.Subject.Code	Country	Year	GDP
NGDP_R	Afghanistan	1980-01-01	3409
NGDP_R	Albania	1980-01-01	2252
NGDP_R	Algeria	1980-01-01	1629
NGDP_R	Angola	1980-01-01	1895
NGDP_R	Antigua and Barbuda	1980-01-01	755
NGDP_R	Argentina	1980-01-01	2353

Description of data

The datasets show years as different columns and the dimensions are wrong, which means that data wrangling and processing has to be done:

1. Change the column names from Year by deleting the first character “X”
2. Select the important columns (e.g. delte the WEO.Country.Code)
3. Use “melt” in order to summarise all years columns in one column and use “WEO.Subject.Code”, and “Country” as an ID
4. Change the summarized values from factor to numeric values
5. Change the Year column to format “Year”