

### **Exercise Sheet 2 — Data manipulation in SAS**

A free version of SAS is available at [http://www.sas.com/de\\_de/software/university-edition.html#f-r-studenten-und-lernende](http://www.sas.com/de_de/software/university-edition.html#f-r-studenten-und-lernende). Documentation can be found here <http://support.sas.com/software/products/university-edition/index.html#s1=3>.

**Problem 1.** Consider again the datasets `US_Foreign_Aid_00s.csv`, `US_Foreign_Aid_10s.csv` and `US_Foreign_Aid_90s.csv` in the zip file `US_Foreign_Aid.zip` on Moodle.

- (a) Read and merge the 3 data sets by country and program
- (b) Run a `proc contents` and look at the format of the FY variables. What happened?
- (c) Transform the missing values into valid SAS missing values and change the format of these variable into numeric
- (d) Reshape the data in the long format
- (e) Compute the total foreign aid over the years, as well as for each year, given to Afghanistan, Iraq and Yemen.
- (f) Create a variable that equals 1 if the help program is concerned with military/security, 0 otherwise. Then 'label' this variable.