# RECSM: Quantitative Methods in Social Research

Day 2 - 03 07 2025

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**Please skim through all of the instructions before getting started.**

## Problem set

**Step 1**: Open a new script and save it as day2. Clear your workspace.

**Step 2**: Load the Asylum dataset from yesterday.

**Step 3**: Explore the potential correlations between perception bias towards Syrian asylum seekers and other variables in the dataset

**Step 4**: Estimate a linear regression model that explains perception bias towards Syrian asylum seekers using only one independent variable. Please justify your choice. Try to come up with a reasonable argument (e.g.) why more of x should lead to more/less of y).

**Step 5**: Plot a scatterplot of that relationship and add the best fit line to the plot.

**Step 6**: Interpret the regression output and try to imagine that you are communicating these results to your neighbours who are statistically illiterate

**Step 7**: Reiterate the process from step 3. Estimate another model – you can choose a different independent variable on the same dependent variable.

**Step 8**: Interpret theese new regression output.

**Step 9**: Please compare the two models and explain which one you would choose.

**Step 10**: Produce a regression table with both models next to each other in some text document, using 'texreg'.

**Step 11**: Add some additional explanatory variables (no more than 4) to your model.

**Step 12**: Interpret the output of the new model in relation to the previous model.

**Step 13**: Check whether the model assumptions are violated (e.g. collinearity issues; normality assumption; heteroskedasticity). To do so, you can use 'performance' package.

**Step 14**: Add an interaction term to the model (e.g. age x news). First, summarise the model and interpret the output of the new model. Then plot the relationship between perception bias and age moderated by tabloid readership.

## Solutions for the problem set