

# **GLM Predictor Matrices**

**Analyses Europe6 and Europe7**

Cecilia Valenzuela

11 December, 2020

## Description

Generation of the predictor matrices for the GLM model from different sources of information:

- Eurostats, European data and statistics, transport data:  
<https://ec.europa.eu/eurostat/web/transport/data/database>
- United Nations Population Division, World Population Prospects 2019: R library wpp2019, `data(pop)`
- Distance

**Daily flight passengers**

## Population counts

Population counts from World Population Prospects 2019, United Nations Population Division, wpp2019 R library. Values for **China, France, Germany, Italy, Other European** and **Spain**.

A predictor matrix for source population and a predictor matrix for destination population are generated, log transformed and standardized.

**Table 1:** Population counts source (left) and destination (right)

	CN	FR	DE	IT	OE	ESP		CN	FR	DE	IT	OE	ESP
CN	NA	1.75	1.75	1.75	1.75	1.75	CN	NA	-0.64	-0.44	-0.7	0.92	-0.89
FR	-0.64	NA	-0.64	-0.64	-0.64	-0.64	FR	1.75	NA	-0.44	-0.7	0.92	-0.89
DE	-0.44	-0.44	NA	-0.44	-0.44	-0.44	DE	1.75	-0.64	NA	-0.7	0.92	-0.89
IT	-0.70	-0.70	-0.70	NA	-0.70	-0.70	IT	1.75	-0.64	-0.44	NA	0.92	-0.89
OE	0.92	0.92	0.92	0.92	NA	0.92	OE	1.75	-0.64	-0.44	-0.7	NA	-0.89
ESP	-0.89	-0.89	-0.89	-0.89	-0.89	NA	ESP	1.75	-0.64	-0.44	-0.7	0.92	NA

Other European population count is computed as the difference between the Europe population and the sum of the populations from France, Germany, Italy and Spain.

## Distance between countries

Add a new chunk by clicking the *Insert Chunk* button on the toolbar or by pressing *Cmd+Option+I*.

When you save the notebook, an HTML file containing the code and output will be saved alongside it (click the *Preview* button or press *Cmd+Shift+K* to preview the HTML file).

The preview shows you a rendered HTML copy of the contents of the editor. Consequently, unlike *Knit*, *Preview* does not run any R code chunks. Instead, the output of the chunk when it was last run in the editor is displayed.