

Spatial Economics – Assignment 2

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*The code that was used in compiling the assignment is available on GitHub at
https://github.com/gustavpirich/spatial_econ/blob/main/02_assignment/02_assignmnet.Rmd.*

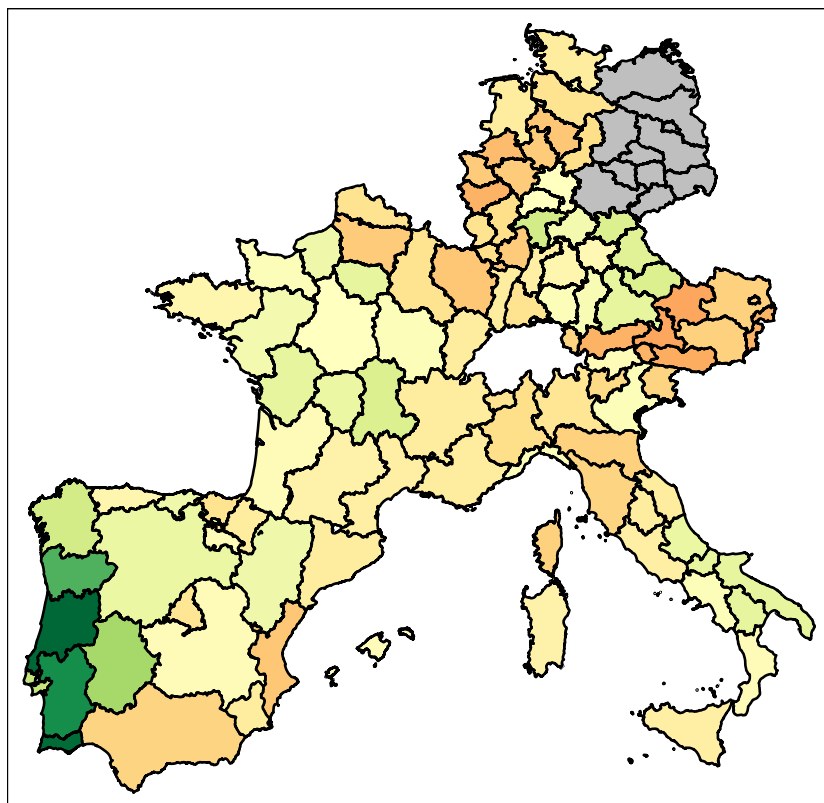
Exercise A

We download the relevant data, and select the respective regions and variables.

```
## Simple feature collection with 259 features and 2 fields
## Geometry type: MULTIPOLYGON
## Dimension: XY
## Bounding box: xmin: -10.61984 ymin: 34.56171 xmax: 34.59286 ymax: 70.08853
## CRS: NA
## # A tibble: 259 x 3
##   Id      Name      geometry
##   <chr> <chr>      <MULTIPOLYGON>
## 1 AT11  "Burgenland" (((17.06573 48.11819, 17.07147 48.11~
## 2 AT12  "Nieder\xf6sterreich" (((14.69022 48.58376, 14.69307 48.58~
## 3 AT13  "Wien"      (((16.18338 48.17002, 16.18215 48.17~
## 4 AT21  "K\xe4rnten" (((12.72771 46.63544, 12.72653 46.63~
## 5 AT22  "Steiermark" (((13.58466 47.47404, 13.59079 47.47~
## 6 AT31  "Ober\xf6sterreich" (((12.86071 47.99652, 12.85806 48.00~
## 7 AT32  "Salzburg"  (((12.65522 47.09962, 12.64038 47.10~
## 8 AT33  "Tirol"     (((10.46881 46.85446, 10.46711 46.86~
## 9 AT34  "Vorarlberg" (((10.1786 47.27054, 10.17369 47.263~
## 10 BE10 "R\xe9gion de Bruxelles-Capitale" (((4.481944 50.79552, 4.470359 50.78~
## # i 249 more rows
```

Calculate the growth rate of productivity from 1980 to 2013 and create a map that shows the productivity growth for each region.

```
tm_shape(EU27) +
  tm_fill("prod_growth",
    id = "Name",
    style = "cont", # Treat data as continuous
    title = "Productivity Growth") +
  tm_borders(col = "black", lwd = 1.3) + # Adjust border color and line width
  tm_layout(title = "Europe's Productivity Growth Rate 1980-2003",
    title.position = c("left", "top")) +
  tm_legend(position = c("left", "bottom"), legend.outside = TRUE)
```



Europe's Productivity Growth Rate 1980-2003

Productivity Growth

