



Exercise 6

Applied Longitudinal Data Analysis

Deadline: Please upload your assignment by March 18 (5 p.m.). Upload one file only (pdf). Include the R-code into the Appendix. Cite data and readings (ideally also R-packages). Number and label all figures and tables.

Download Easy Share to study one of the following topics:

Topic 0: The causal effect of partnership status on depression (class)

Topic 1: The causal effect of **smoking** on depression

Topic 2: The causal effect of **retirement** on depression

Topic 3: The causal effect of **grandparenthood** on wellbeing

Topic 4: The causal effect of **care giving** on wellbeing

Topic 5: The causal effect of **vigorous sporting** on health outcomes at advanced ages

Topic 6: The causal effect of **retirement on vigorous sporting**

6.1

- Formulate a testable hypothesis that relate to your topic. The readings on moodle may be helpful to buttress the hypothesis.
- Do you expect effect heterogeneities by gender?

6.2

- Prepare the data as described below (see Appendix). Generate the summary statistics (by main independent variable). Briefly comment on the table.
- Present the distribution of your outcome variable (by main independent variable) in a suitable figure (e.g., histogram).

6.3

- Estimate an OLS-model with your variable of interest as the dependent variable. Control for your key variable of interest as well as the socio-demographic variables (age, gender, education, country, and wave). Describe and discuss the results.
- Estimate a FE-model. Specify the model in a meaningful manner. Describe and discuss the results.
- Estimate the FE-model by gender. Describe and discuss the results.

6.4

You are interested in casual effects. Do you think that your analysis under 6.3 has generated causal effects? Discuss the limitations of your investigation.

Appendix

Preparation: Download easy SHARE. The data is organized in long format and contains all survey years currently available in the teaching version of SHARE.

- DATA01: Reduce the sample to Austria, Germany, Sweden, Netherlands, Spain, Italy, France, Denmark, Greece, Switzerland, Belgium
- DATA02: Reduce the sample to respondents aged 50-79.
- DATA03: Reduce the sample to cases with valid information on your dependent variable
- DATA04: Reduce the sample to cases with valid information on your independent variables

Variable	Realization	Variable label
mergeid	..	If of respondent
wave	1 ...8	Wave
Dependent variables		
eurod	0 ... 12	Depression index
casp	0 ... 48	Wellbeing index
Main independent variables		
Partnerinh	1 no partner in household 2 partner in household	Partner in household?
smoking	1 yes 2 no	Smoking at present?
br015_	1 More than once per week 2 Once a week 3 One to three times a month 4 Hardly ever	Sports or activities that are vigorous
ch021_mod	0 ... 333	Number of grandchildren
sp008_	1 yes 2 no	Given help last twelve months
ep005_	1 retired 2 employed/self-employed 3 unemployed 4 disabled 5 homemaker	Current job situation
Socio-demographic		
age	50.1 ... 79.9	Age
female	0 male 1 female	Gender
country	11 Austria 12 Germany 13 Sweden 14 Netherlands 15 Spain 16 Italy 17 France 18 Denmark 19 Greece 20 Switzerland 23 Belgium	Country
iscd1997_r	0 pre-primary 1 primary 2 Lower secondary 3 Upper secondary 4 Post secondary, non-tertiary 5 Tertiary, first stage 6 Tertiary, second stage	Level of education (ISCED 1997)
Relevant controls?		
co007_	1 With great difficulty 2 With some difficulty 3 Fairly easily 4 Easily	Is household able to make ends meet?
maxgrip	0-99	Grip strength