Exercise 1

Applied Longitudinal Data Analysis

Deadline: Please upload your assignment by Monday 5 p.m. (12-02-2024). Upload **one** file only (pdf). Include the R-code into the Appendix. Please quote the readings and the data. Number the figures and tables. Include meaningful and informative headings to all tables and figures. Move lengthy tables into the Appendix (such as Kaplan-Meier survival table).

Data Preparation

The data has been pre-processed and is available on moodle (see list of variables in Appendix).

Exercise 1.1

Select a country of your choice. Do you think that there are differences by gender in home leaving patterns? Do you assume that gender differences have increased or narrowed across cohorts? Formulate 2 testable hypotheses. Buttress each hypothesis (2-3 sentences). The papers on moodle may be helpful to develop testable hypotheses.

Exercise 1.2

a) Plot a survival function by gender. Describe the figures (1-2 sentences).
b) Plot a survival function by birth cohort and gender. Describe the figures (2-3 sentences).
c) Do your results support your hypotheses? (2-3 concluding sentences)

Exercise 1.4

a) Event history data may be collected by retrospective as well as prospective surveys. ESS is a retrospective survey. Do you think that your results are affected by this design? [max 250 words]
b) How does the measurement of the outcome variable (see questionnaire) affect the results? [max 250 words]

Appendix

Name	Realization	Class	Description
TIME		numeric	Age at leaving home for cases with event Age at censoring for censored cases
EVENT	0 1	numeric	Variable that equals 1 for cases with event and 0 otherwise
COHORT	1920-39 1940-59 Etc.	factor	Cohort groups
GENDER	Male Female	factor	Gender
cntry[1]	AT, BE etc	Haven	Country (Austria, Belgium etc.)

[1] AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, HR, HU, IE, IS, IT, LT, LV, ME, NL, NO, PL, PT, RS, SE, SI, SK