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THE GENDER AND EDUCATION GAP IN SELF-RATED HEALTH TRENDS IN SUBNATIONAL EUROPE

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Motivation

- Accumulated evidence has shown educational inequalities in self-rated health over time across Europe. However, there is a lack of understaning on how trends evolve subnationally.
- Monitoring health inequalities at fine spatial scales is crucial for policy planning, but data sparsity and complex survey designs pose challenges.

The European Social Survey (ESS)

The ESS is designed to measure the values, attitudes, and behavioral patterns of the populations across Europe.

- A biennial, cross-national survey conducted in approximately 30 European countries since 2002.
- In each participating country, a minimum of 1,500 respondents are surveyed.
- Respondents are drawn from a probabilistic sample representing the countries' population aged 15 and above.

How about the survey design: Example of Switzerland

2002-2004: Random sampling in two stages:

- Selection of a specific number of households in every region of Switzerland (national registry of phone numbers and addresses)
- Random drawing of one person from each household/address

2006-2008: Random sampling in three stages:

- Sample of postal codes representing all regions of Switzerland
- Selection of a specified number of households from each of the sampled postal codes
- Random drawing of one person from each household

Since 2010: Random sampling in one stage:

The ESS survey sample design is, since 2010, based on a simple random selection of individuals on national level, without stratification.

Which data do we use?

- We use data from 2010 to 2024 across 195 NUTS-2 regions in up to 31 countries.

Measures

- **Self-rated health**: “How is your health in general?”
  1: very good/good, 0: fair/bad/very bad
- **Gender**: binary
- **Age**: 3 groups: less than 35, 35–55, older than 55.
- **Education**: low level, medium, high level.
- **Region**: NUTS2/NUTS1 level information per respondent.

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- In the end we would like to draw conclusion for the entire popualtion not just our survey population.

Our model in 1 page

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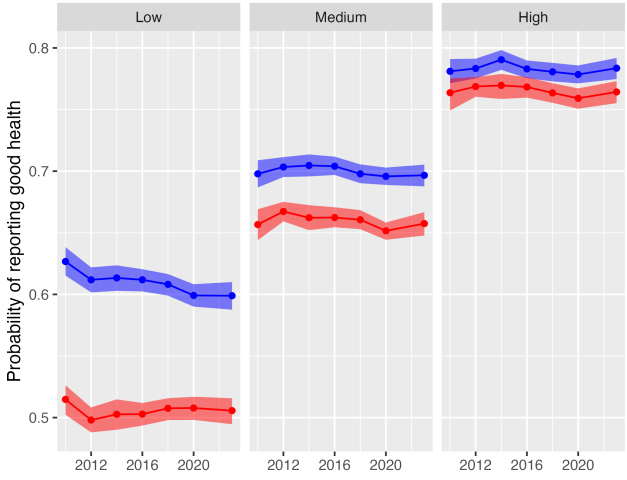
1. It is a logistic model due to the binary outcome variable SRH.
2. Inclusion of random effects for space and time that allow for smoothing by borrowing strength of neighbouring time points or regions.
3. Post-stratification to get representative estimates at population level.

Posterior probability of reporting good health



Mean sex difference in reporting good SRH

Discussion

This study intends to make an empirical and methodological contribution to understanding inequalities in self-rated health trends in Europe by presenting systematic sub-national analyses over time disaggregated by two prominent determinants of health: gender and education.

Our results show

- modest improvements in self-rated health over time, with gains concentrated among women
- substantial within-country heterogeneity emerges, underscoring the importance of small-area analyses.

Thank you!

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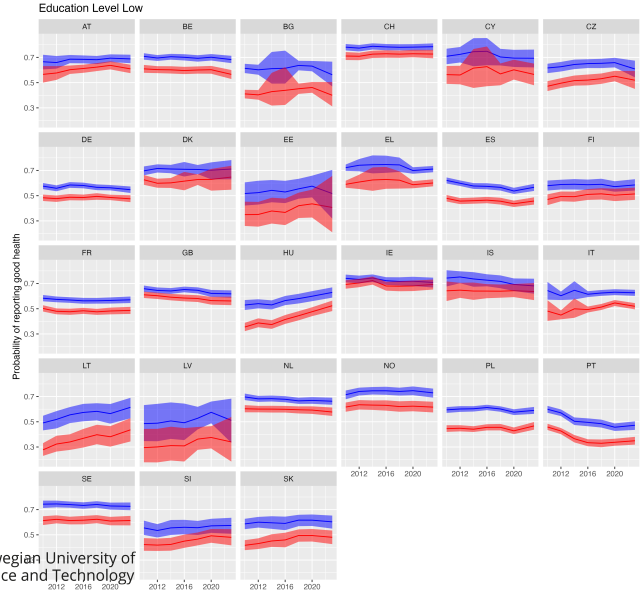

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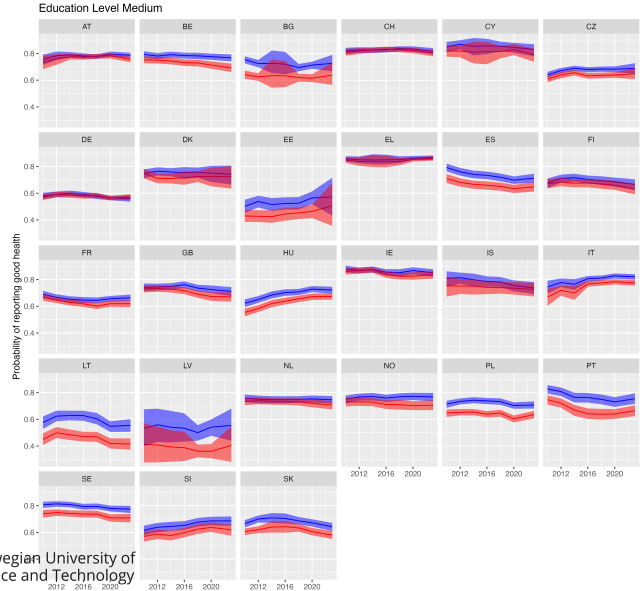

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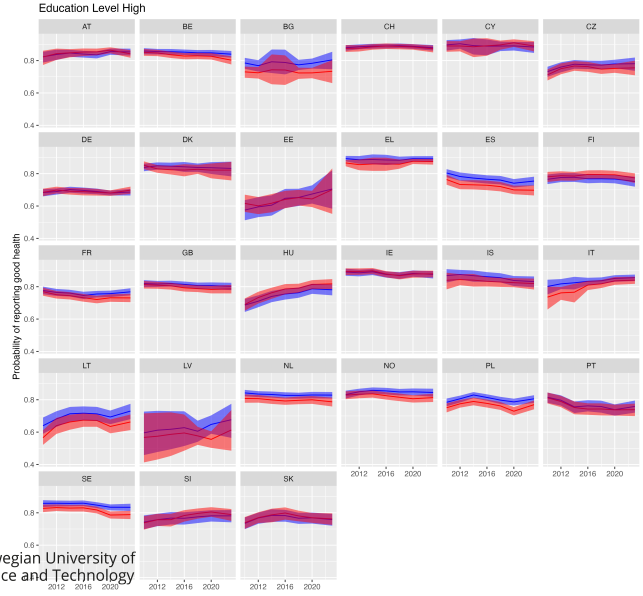

Posterior probability of reporting good health