The art of meaningful international comparisons in population aging research

Axel Börsch-Supan

Regional Conference on the Health and Socioecononomic Wellbeing of Older Persons in Developing Asia: Role of Individual and Household Data
Manila (virtual), 7 September 2021

1. **The fascination of heterogeneity: Chances and challenges of international comparisons**

2. **Types of data needed: SHARE and SPLASH**

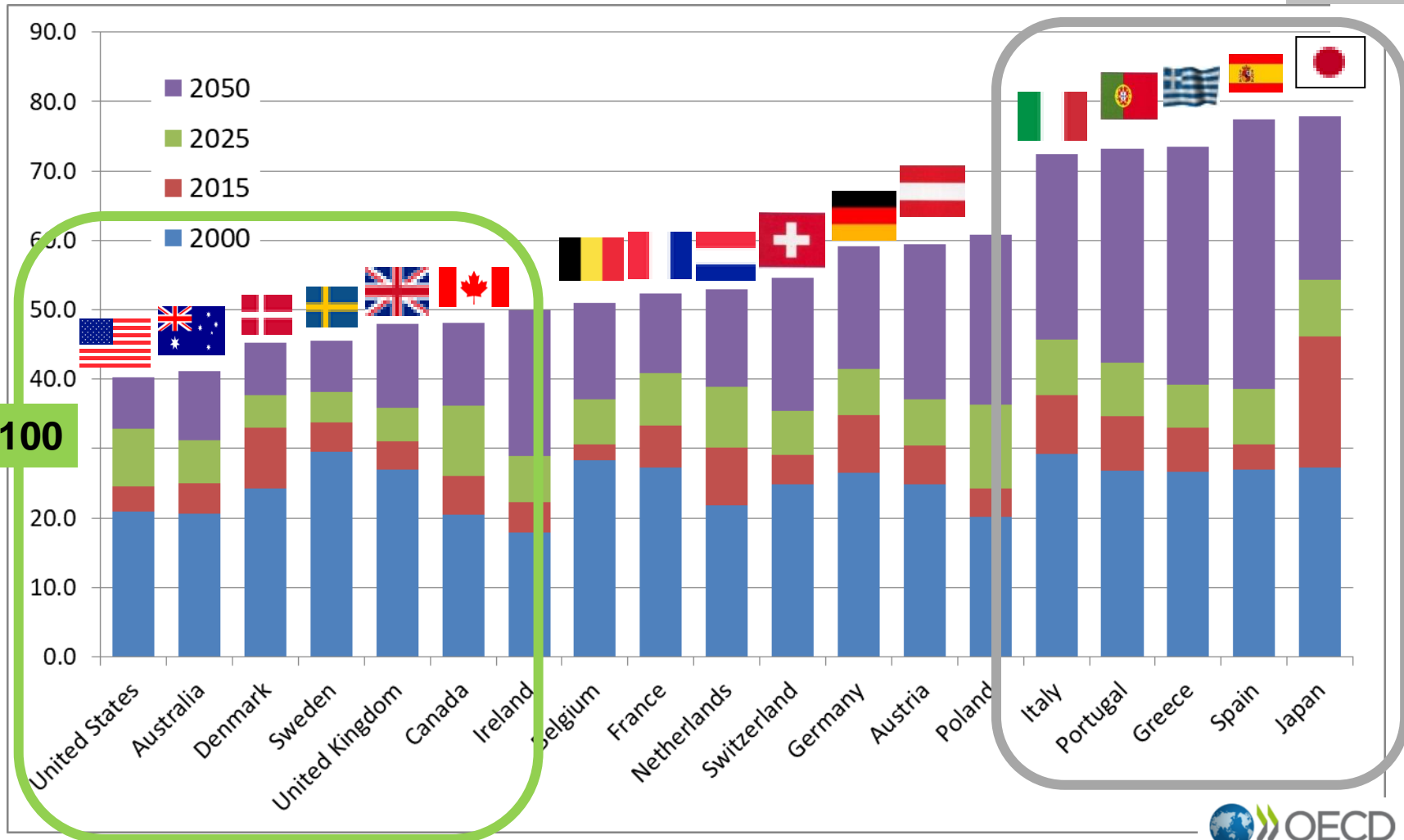3. **Distilling a message: The NBER International Social Security project**

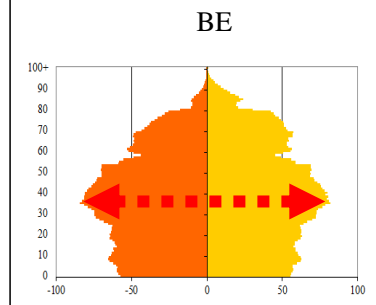# Old-Age Dependency

Population 65+/population 20-64

80:100

Legend:
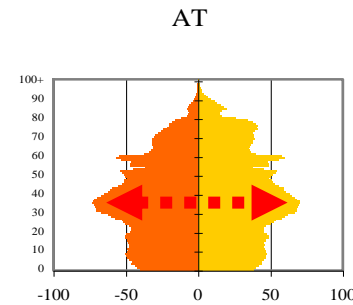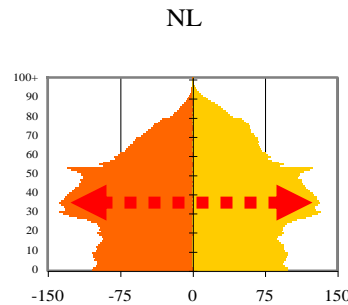- 2050
- 2025
- 2015
- 2000

40:100

Countries (left to right): United States, Australia, Denmark, Sweden, United Kingdom, Canada, Ireland, Belgium, France, Netherlands, Switzerland, Germany, Austria, Poland, Italy, Portugal, Greece, Spain, Japan

Demography

BabyBoom BustBust transition

DE NL AT BE
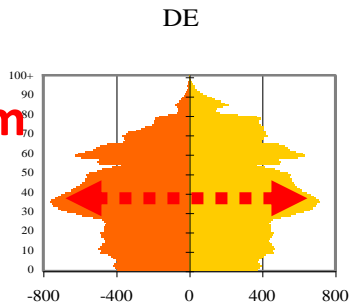
Past low fertility and longevity

IT ES PT GR
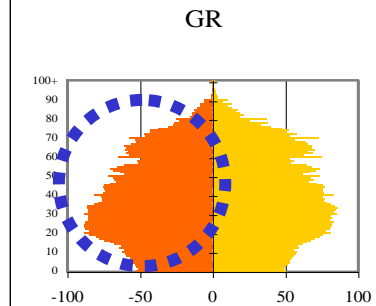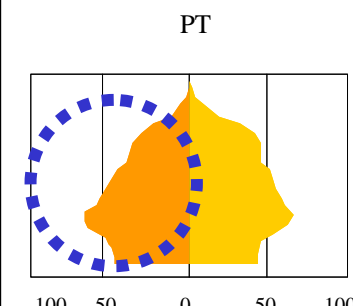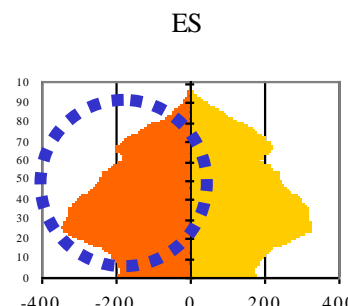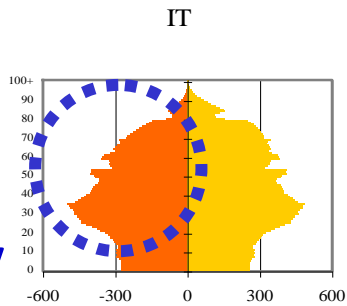
High current fertility

FR SE DK USA

Source: U.S. Census Bureau, International Data Base.
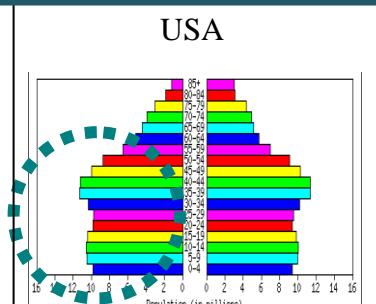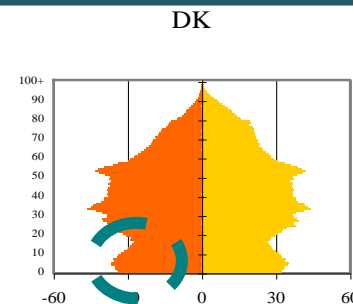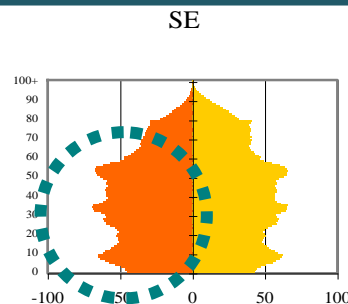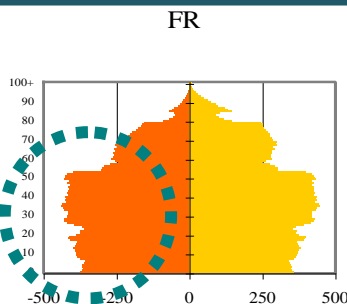
International data as necessity
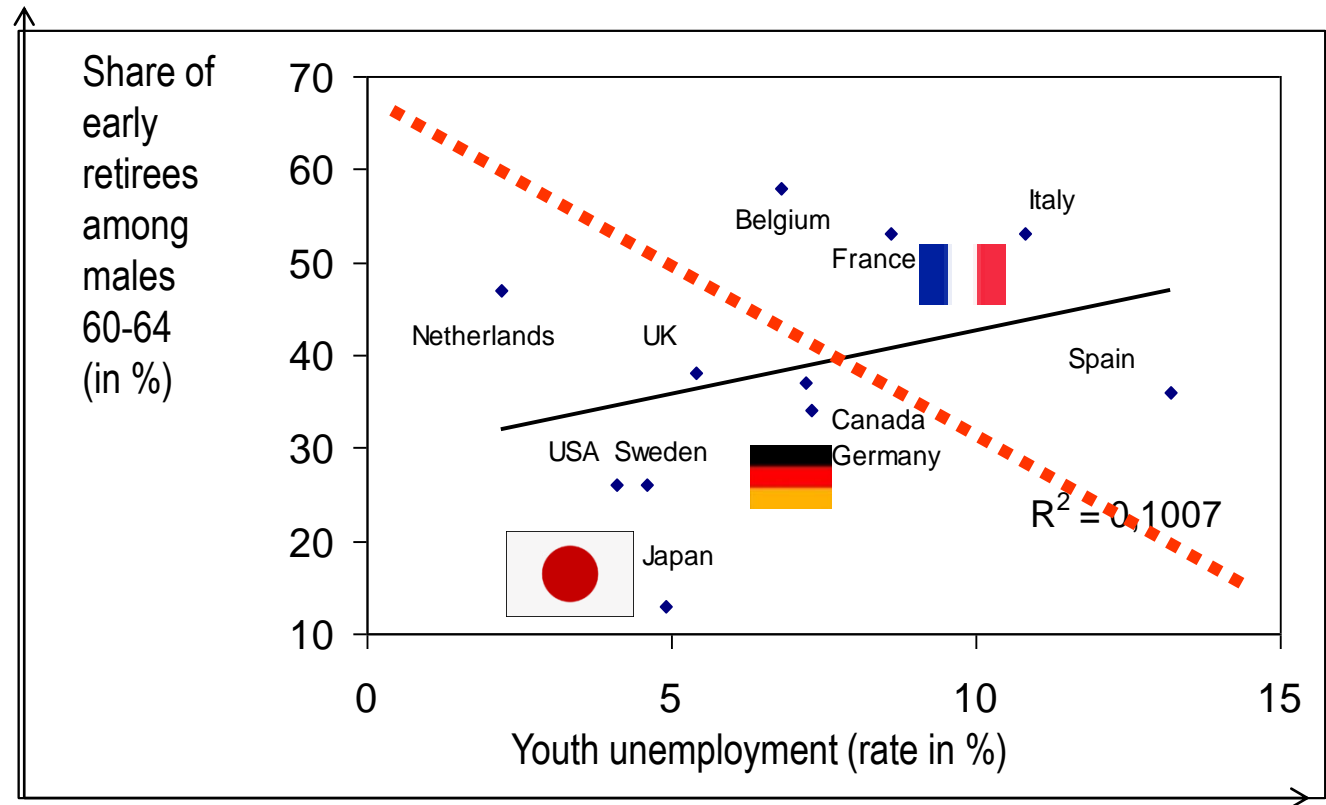
"Lump of labor fallacy"

International data for instruments

Retirement and cognition
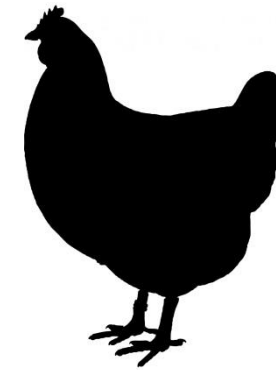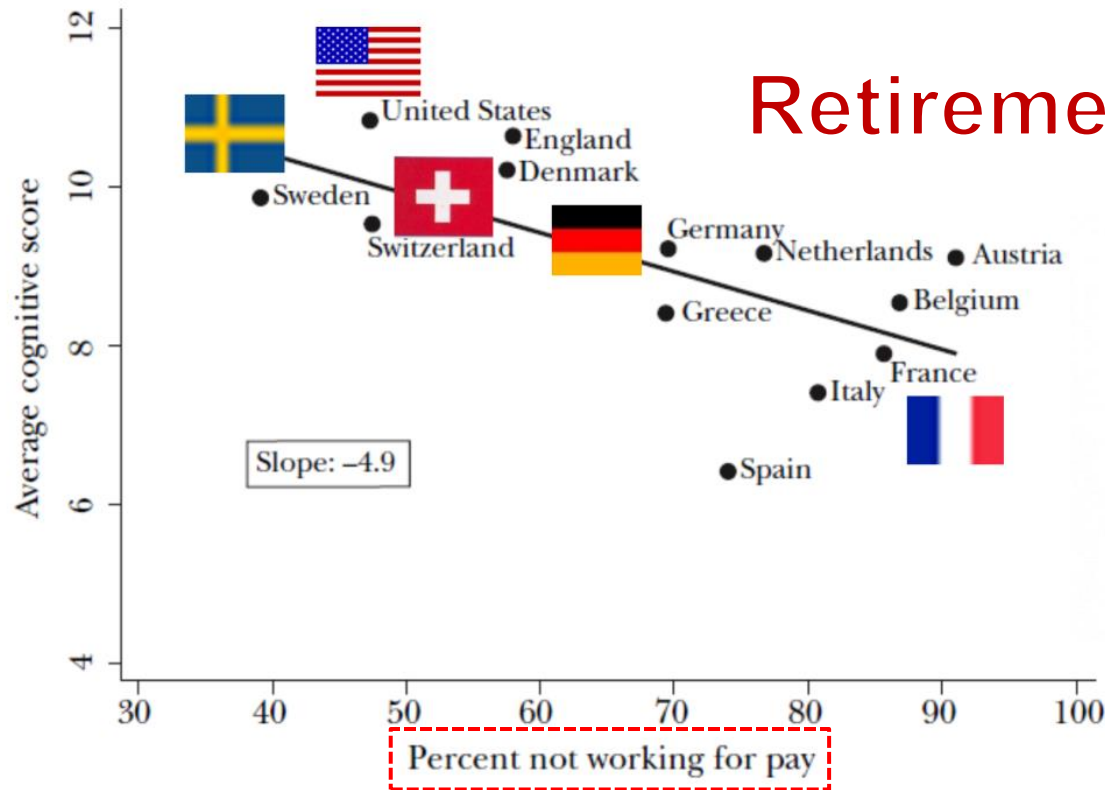
What is cause, what is effect?

Identify causal effect
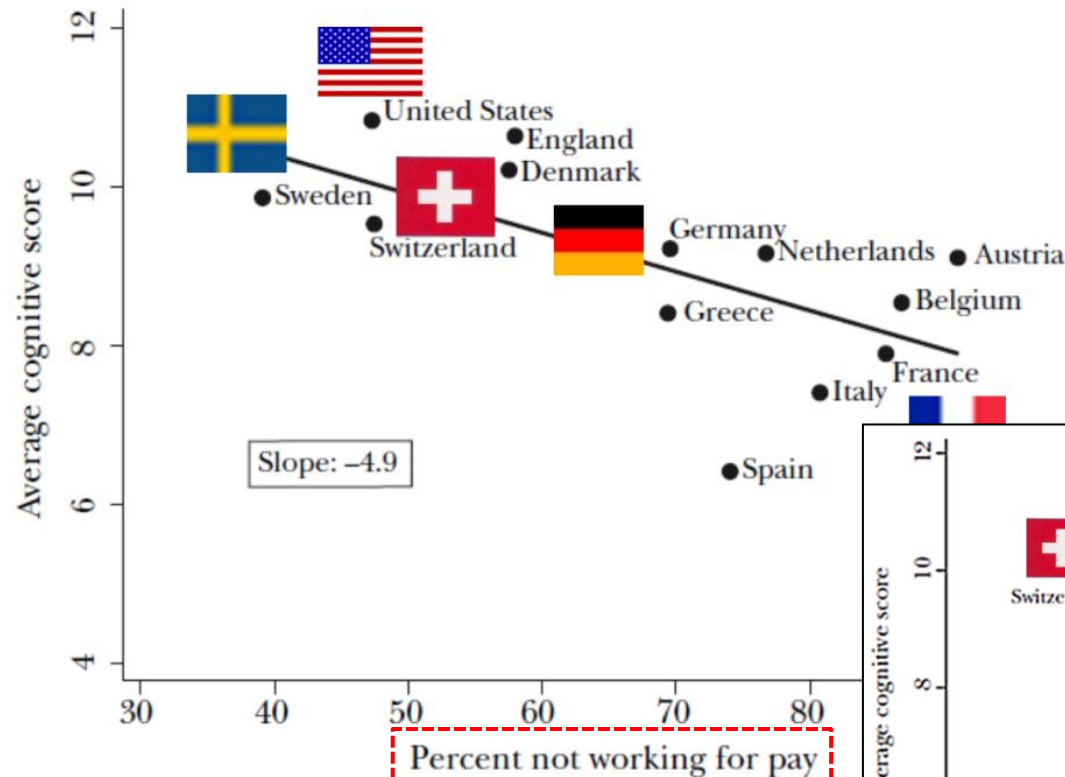
Exploit
international variation
in early retirement rules
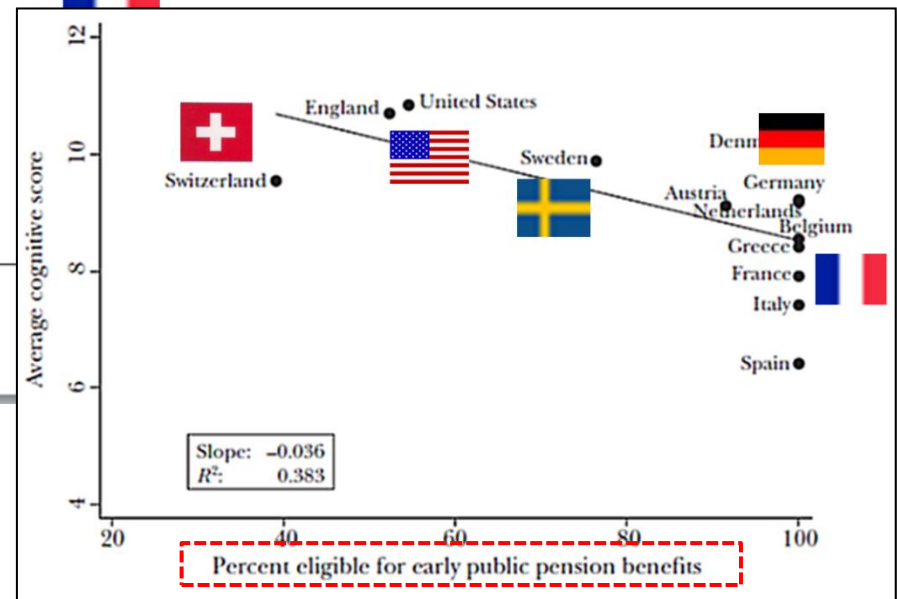
Effects of Covid-19 in Europe

Share of HH with 10%+ income loss

SHARE COVID CATI preliminary (rel0), weighted data

Causes for effects?

Income loss by pandemic severity

Income loss by lockdown stringency

Negative, insignificant

Positive, significant
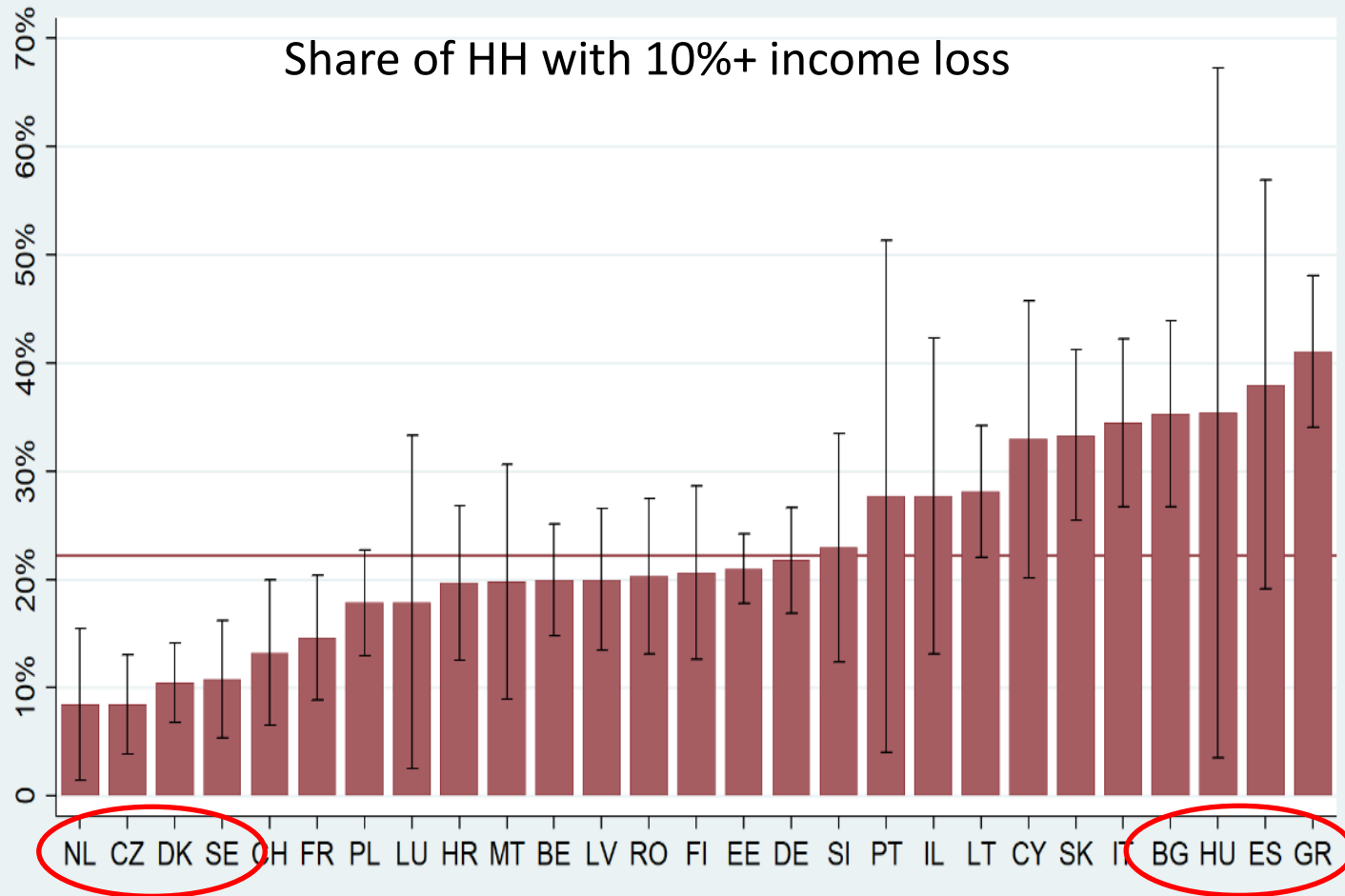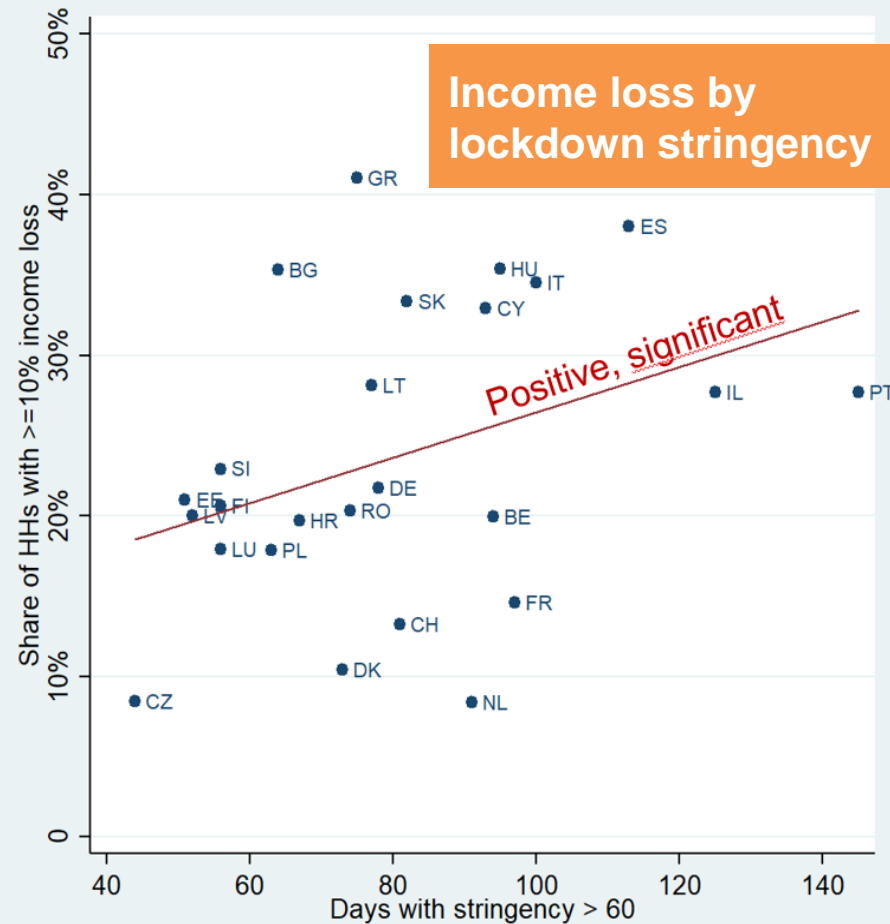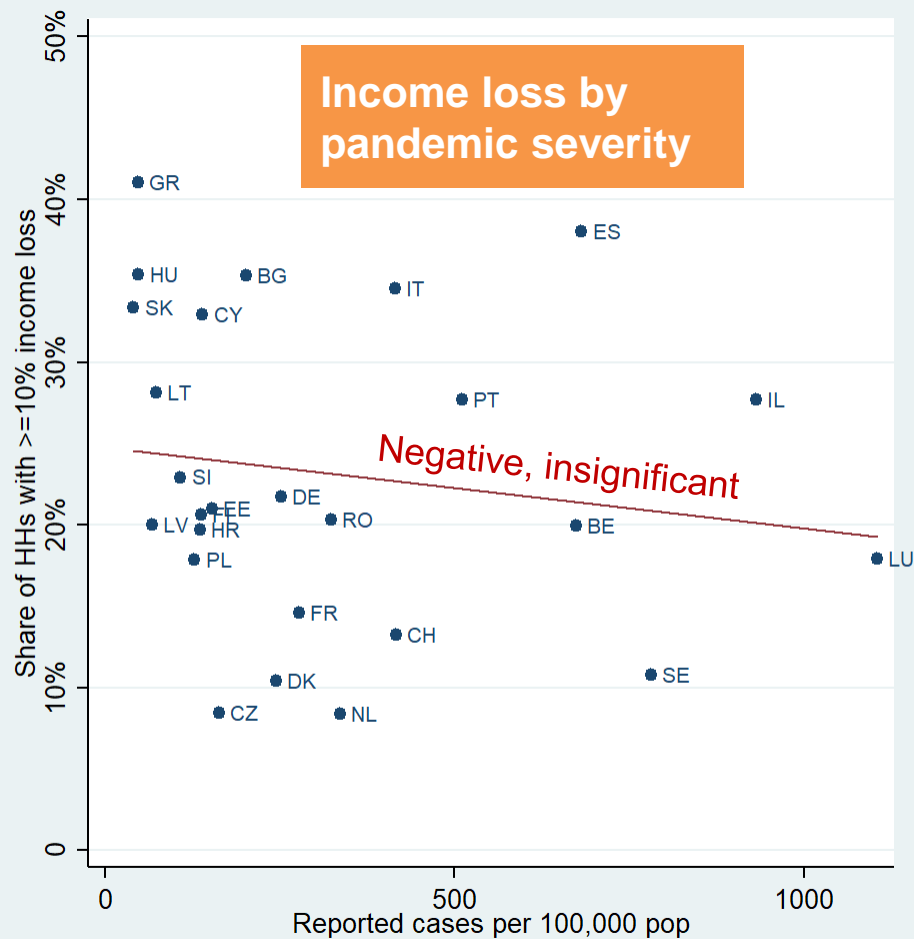
SHARE COVID CATI preliminary (rel0), weighted data

Challenges and pitfalls: health measurement
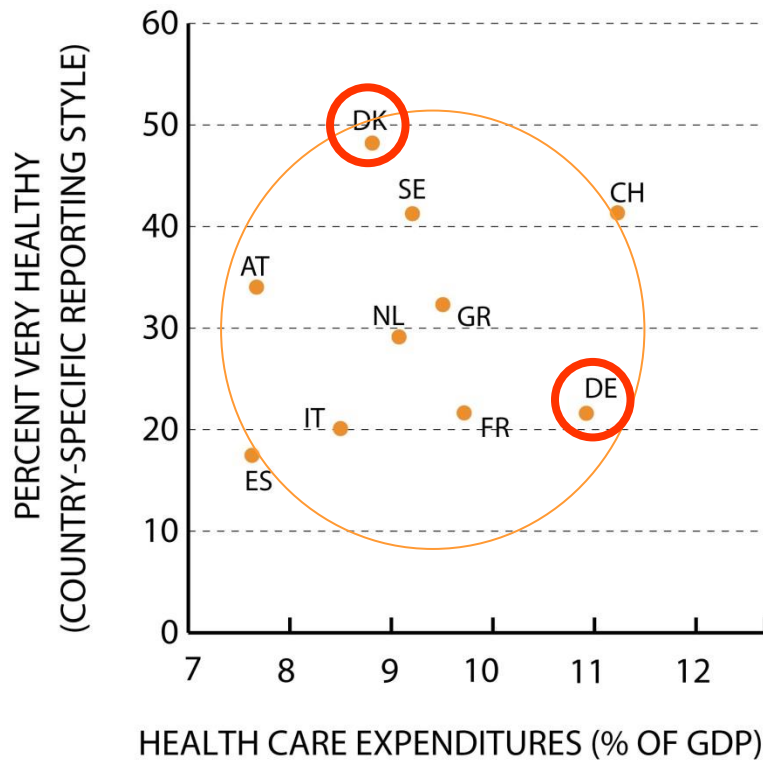
Effects of health expenditures on health: Are they wasted?

Subjective measure of health: "poor" to "excellent"

Differential item functioning

Source: Jürges, 2006
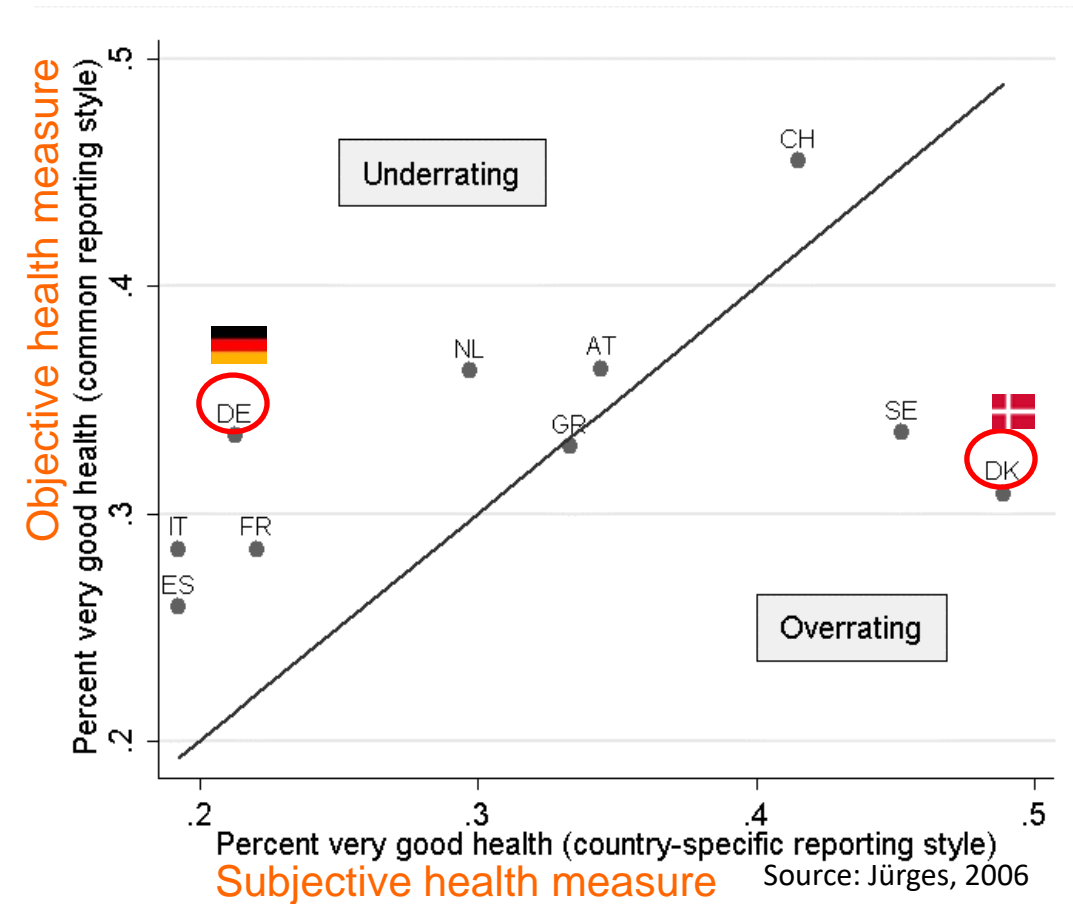
Objective measures of health

Are health care expenditures wasted?
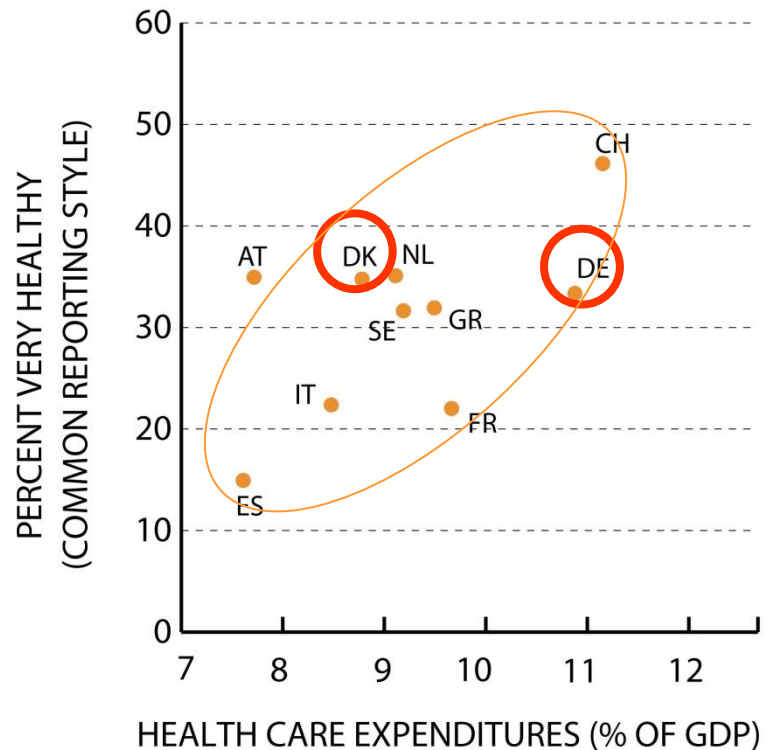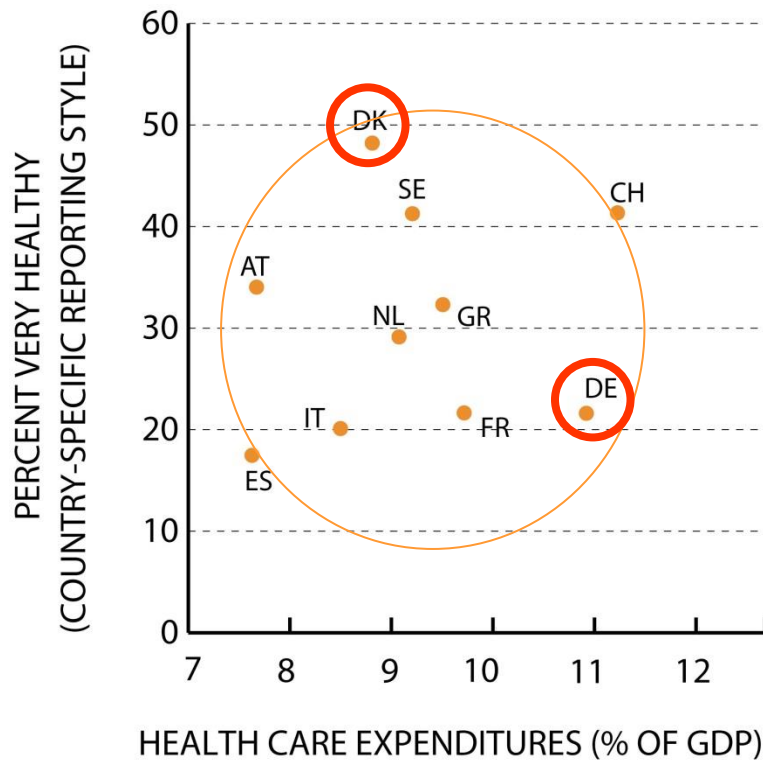
Subjective vs. objective measures of health

1. The fascination of heterogeneity:

   Chances and challenges of international

   comparisons

2. Types of data needed:

   SHARE and SPLASH

3. Distilling a message:

   The NBER International Social Security project

SHARE data infrastructure

SHARE | ER IC
SURVEY OF HEALTH, AGEING AND RETIREMENT IN EUROPE

9 waves of data 2004-2020
140,000 respondents **aged 50+**
480,000 interviews
in 28 countries

120,000 retrospect **life histories**

95,000 punches of dried **blood**

Global network:

USA

British Isles
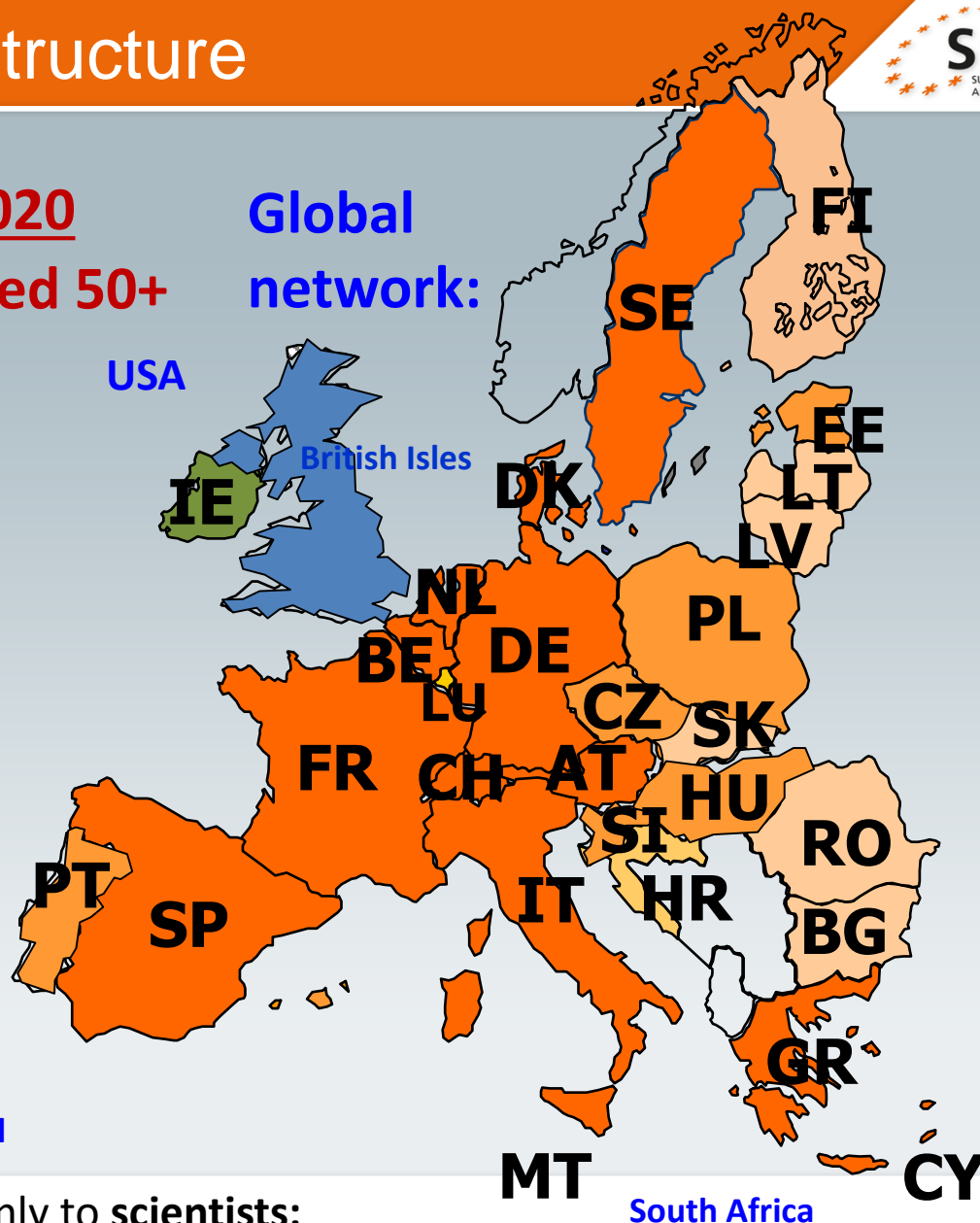
Korea
Japan
China

India
Indonesia

Mexico, Brazil

South Africa

Data are **free** of charge, given only to **scientists:**
SHARE-ERIC.eu

Map labels: FI, SE, EE, LT, LV, DK, NL, BE, LU, DE, PL, CZ, SK, FR, CH, AT, HU, SI, IT, HR, RO, BG, PT, SP, IE, GR, MT, CY, IL

A transdisciplinary picture of human life

SHARE ERIC
SURVEY OF HEALTH, AGEING
AND RETIREMENT IN EUROPE

▸ **Health, social and economic situation closely related**

▸ Broad range of **questions, measurements and tests**:

   ▸ **Socio-economic status**: labor force participation, retirement, income (amount and sources), wealth, housing, consumption, pension claims, expectations, well-being

   ▸ **Health:** subjective-objective (self-report, ADL/IADL, conditions, physical performance tests, biomarkers: HbA1c, CRP, Lipids, Cytokines), physical-mental (cognition, MMSE, CES-D, Euro-D), health behaviors, health utilization and insurance coverage

   ▸ **Social participation:** activities (volunteering), family and social networks (size and intensity), help (time, money)

▸ **Face-to-face interviews** by trained interviewers, every 2 years

▸ Link to past and current **health, social and economic policies**

SPLASH collects data on institutional context to ease cross-country evaluation of welfare state policies

Longitudinal Survey Strategy

1. Life course background

SHARE waves 2004 – 2018

Retrospective life histories including parental and childhood conditions

2. Immediate pre-Corona status

Face-to-face interviews in Wave 8, stopped in March 2020 after about 70% of sample

3. First SHARE Corona Telephone Survey in June/July 2020

Health, work, economic and social conditions during the first wave of the pandemic

4. Second SHARE Corona Telephone Survey in June/July 2021

Health, work, economic and social conditions during the "third wave" of the pandemic

5. Immediate post-Corona status

Face-to-face interviews in Wave 9, planned for November 2021

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Motivation

Striking reversal of labor force participation among older workers:
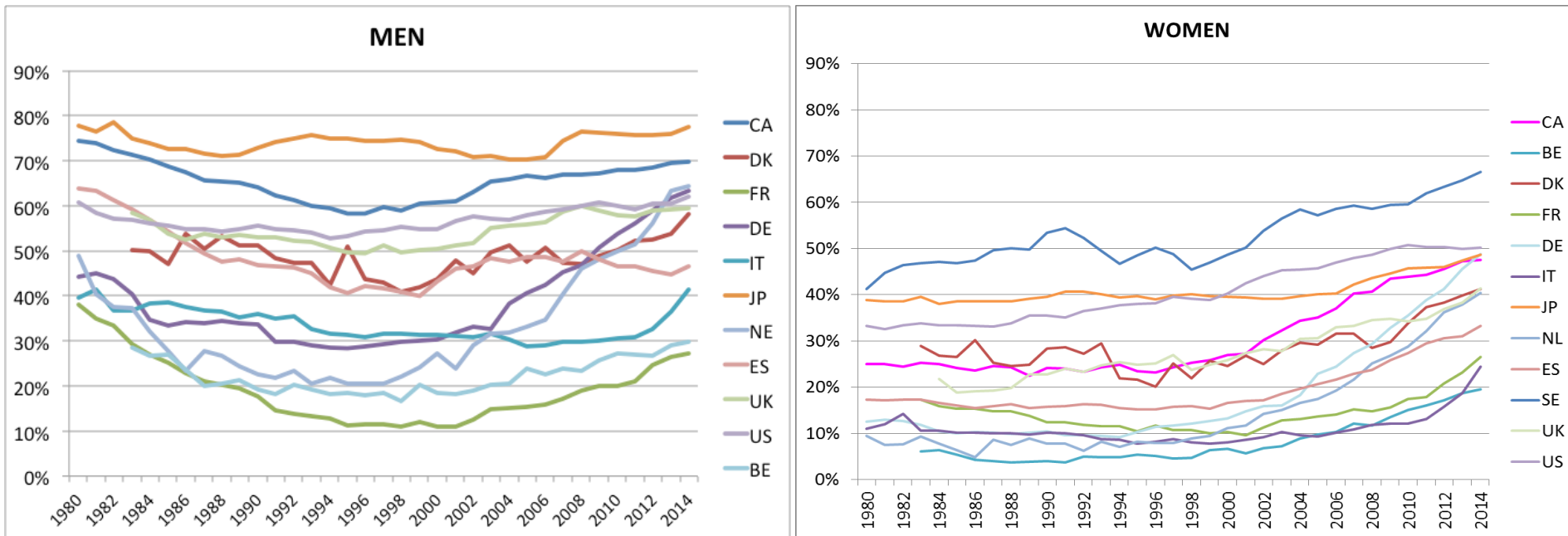
Various social security and labor market reforms at the same time

How much of the labor force trends can be explained by the changing incentives of social security policy?

1. Germany
2. United States
3. United Kingdom
4. Canada
5. Netherlands
6. Italy
7. Belgium
8. France
9. Japan
10. Spain
11. Sweden
12. Denmark

1. **Which relevant reforms have taken place**

    ▸ *Structured* verbal descriptions; use *same* language; *update*

    🇩🇪 1992, 2001, 2004, 2007, 2014, 2017

2. **Quantitative policy parameters**

    ▸ EEA, NEA, FRA, actuarial adjustments, replacement rate,…

    ▸ by socio-econ characteristics, by pathway, by sector
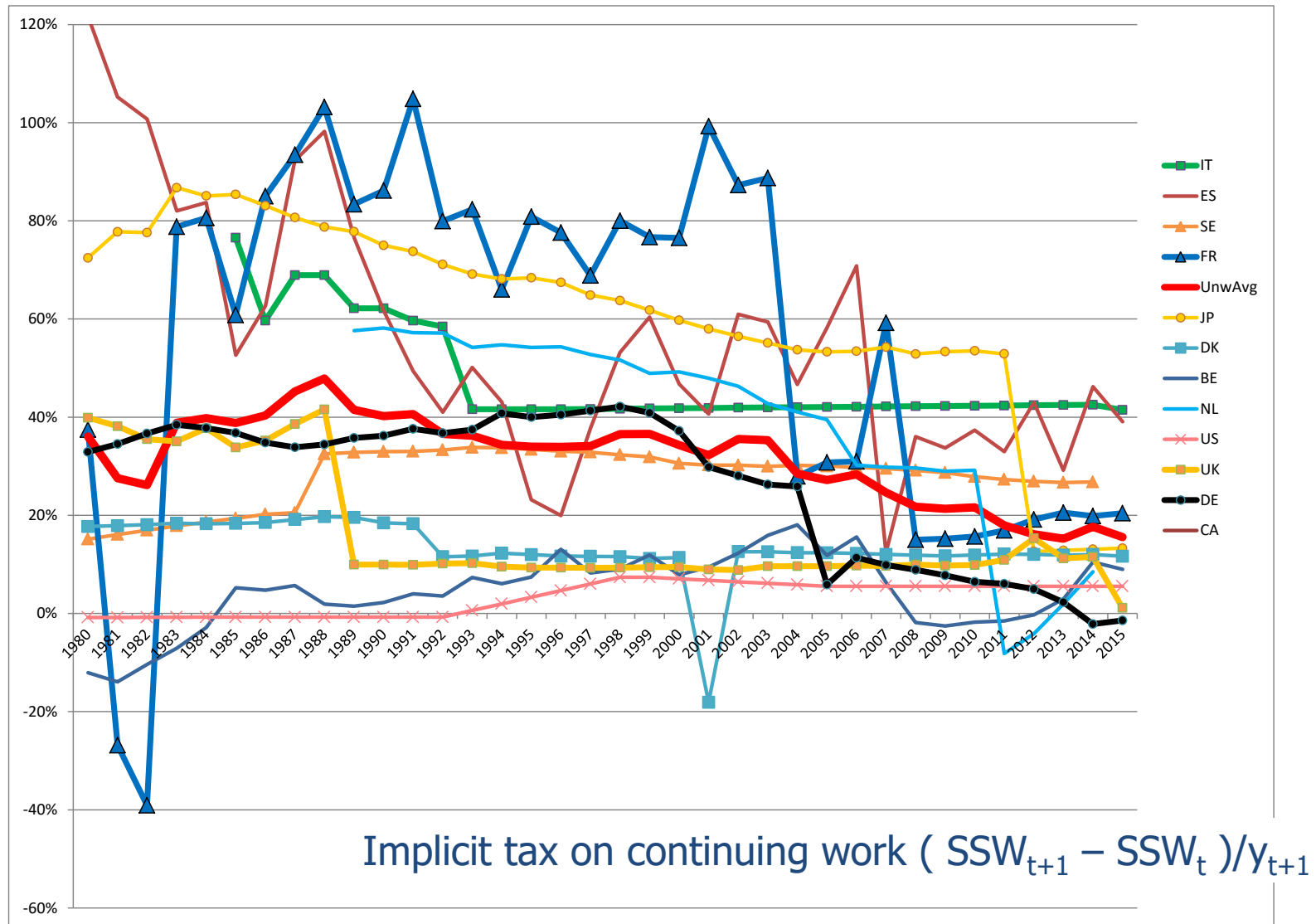
    🇩🇪 1992, 2001, 2004, 2007, 2014, 2017

3. **Economic indicators**

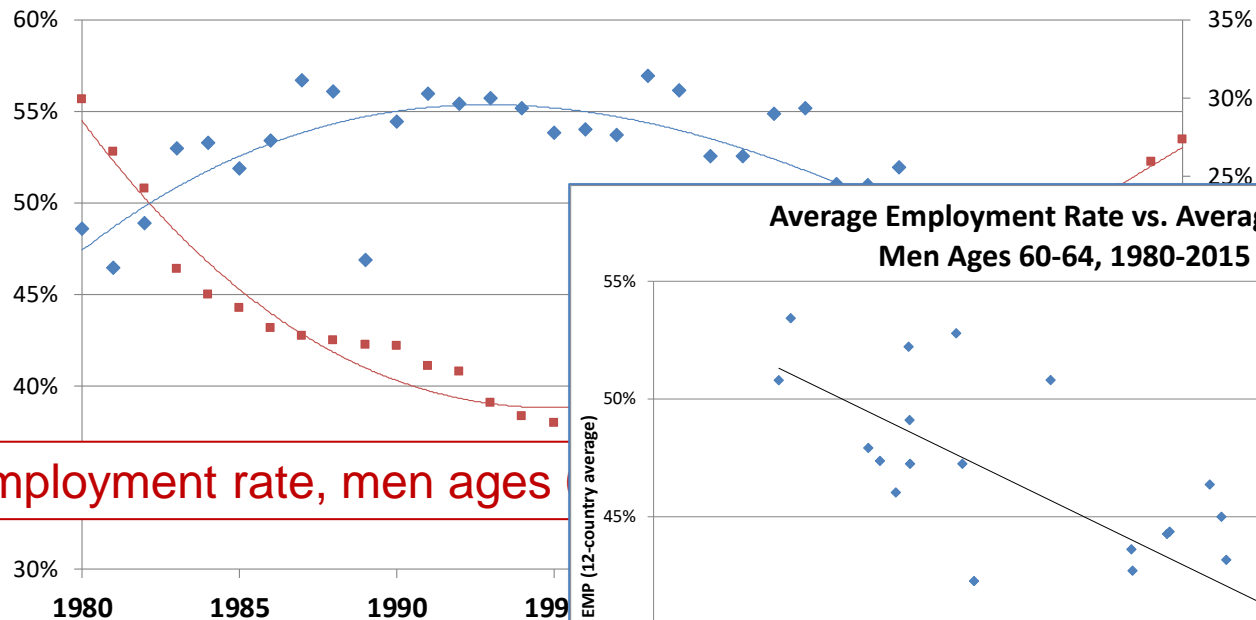   ▸ Implicit tax on continuing work $(\text{SSW}_{t+1} - \text{SSW}_t)/y_{t+1}$

Find signal

Implicit tax on continuing work ($SSW_{t+1} - SSW_t$)/y_{t+1}

Result

Average financial loss when postponing retirement (right scale)

Average employment rate, men ages

Average Employment Rate vs. Average ITAX,
Men Ages 60-64, 1980-2015

y = -0.6831x + 0.6072
R² = 0.6749

EMP (12-country average)

ITAX (12-country average)
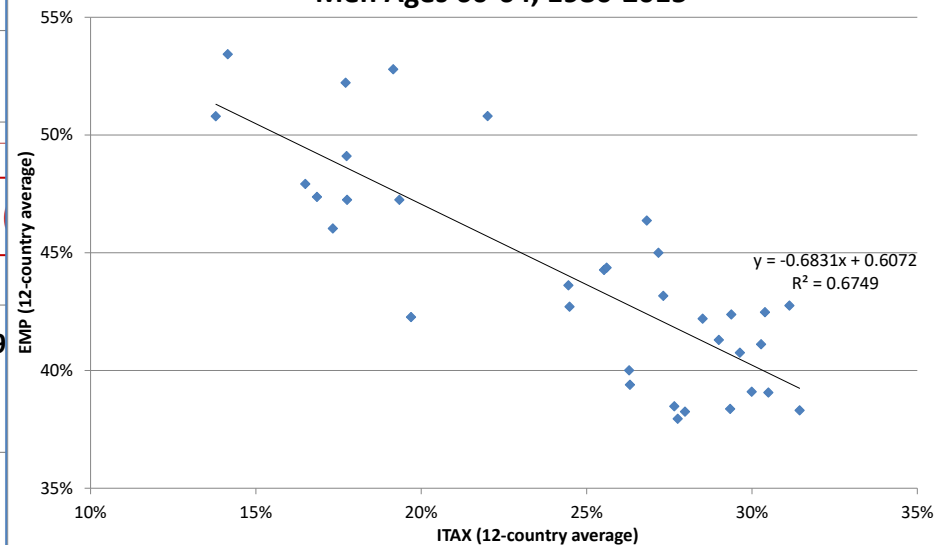
General lessons

- Incentive variables from **SPLASH** data base

- Which **micro data**? SHARE-HRS-ELSA-JSTAR, EU-LFS, EU-SILC

- Which **reforms** are covered? Identification!

- Which **covariates** are available? Health, education, other HH members, tax rate, benefit type?

- **Simple probit/logit regressions**:
  - Prob(receives pension) = f(ITAX; age, covariates)
  - Prob(out of LF) = f(ITAX; age, covariates)

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