



mea

Health and Early Retirement: Policy lessons from international comparisons

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RAND and NBER

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data of the elderly?“ Tokyo, 29 July 2011*



▶ How do public policies work?

- do they reach their intended aims?
 - micro level
 - macro level
- do they avoid unintended side-effects?
 - micro level
 - macro level

*Cross-national
variation of
policies*

▶ Research instruments:

- ex ante: mathematical models (e.g. of overlapping generations)
field and social experiments
- ex post: **econometric analysis of survey and macro data**

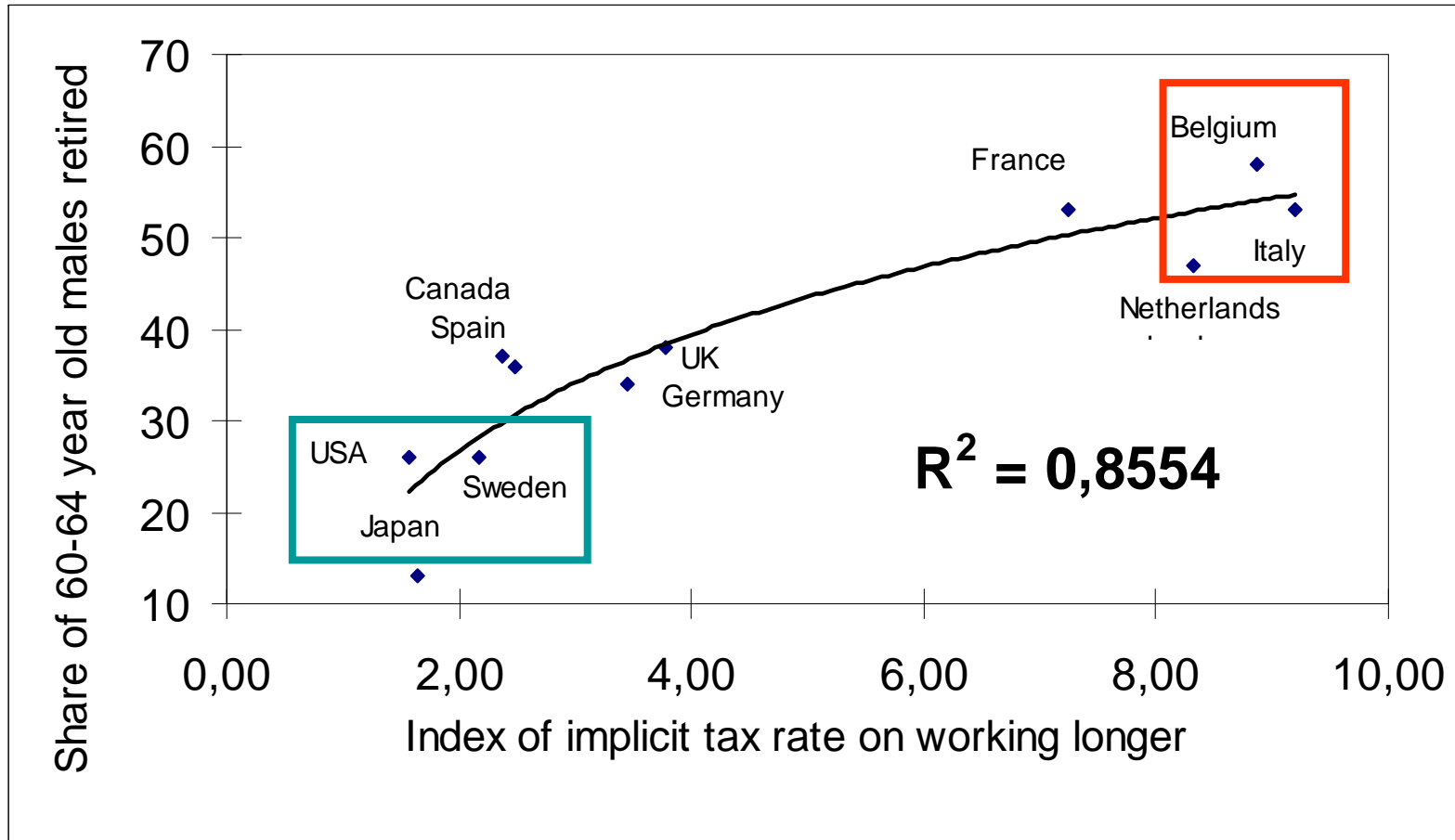
*Cross-
national
data sets*



1. **Some typical insights** from cross-national correlations
2. The **causality** problem
3. **The SHARE data set:** The Survey of Health, Ageing and Retirement in Europe
4. Brief example: Side effects of **disability insurance**



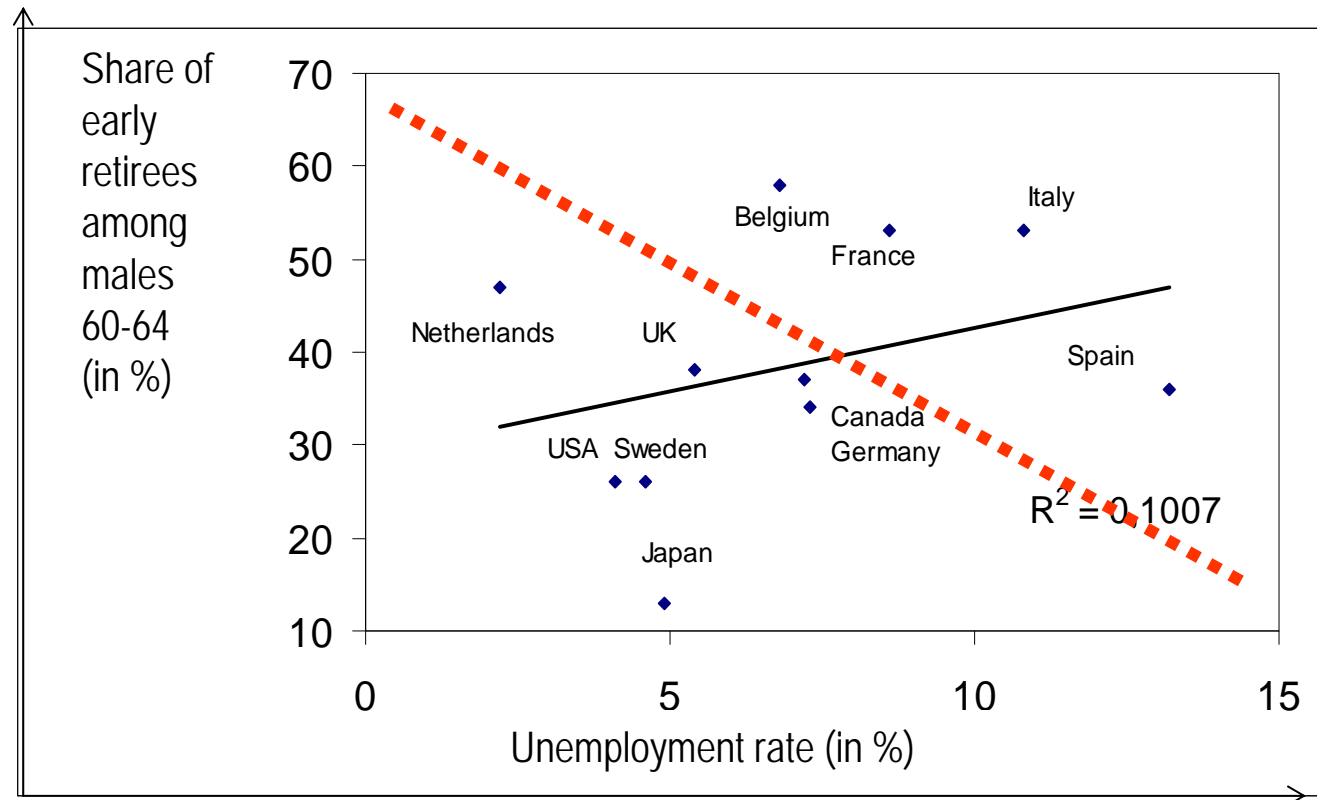
Example 1: Negative incentive effects of pension provisions on early retirement (Gruber/Wise plus large international group)





Example 2: The lump of labor fallacy (Börsch-Supan with OECD employment data)

*The old
should
make
place...*

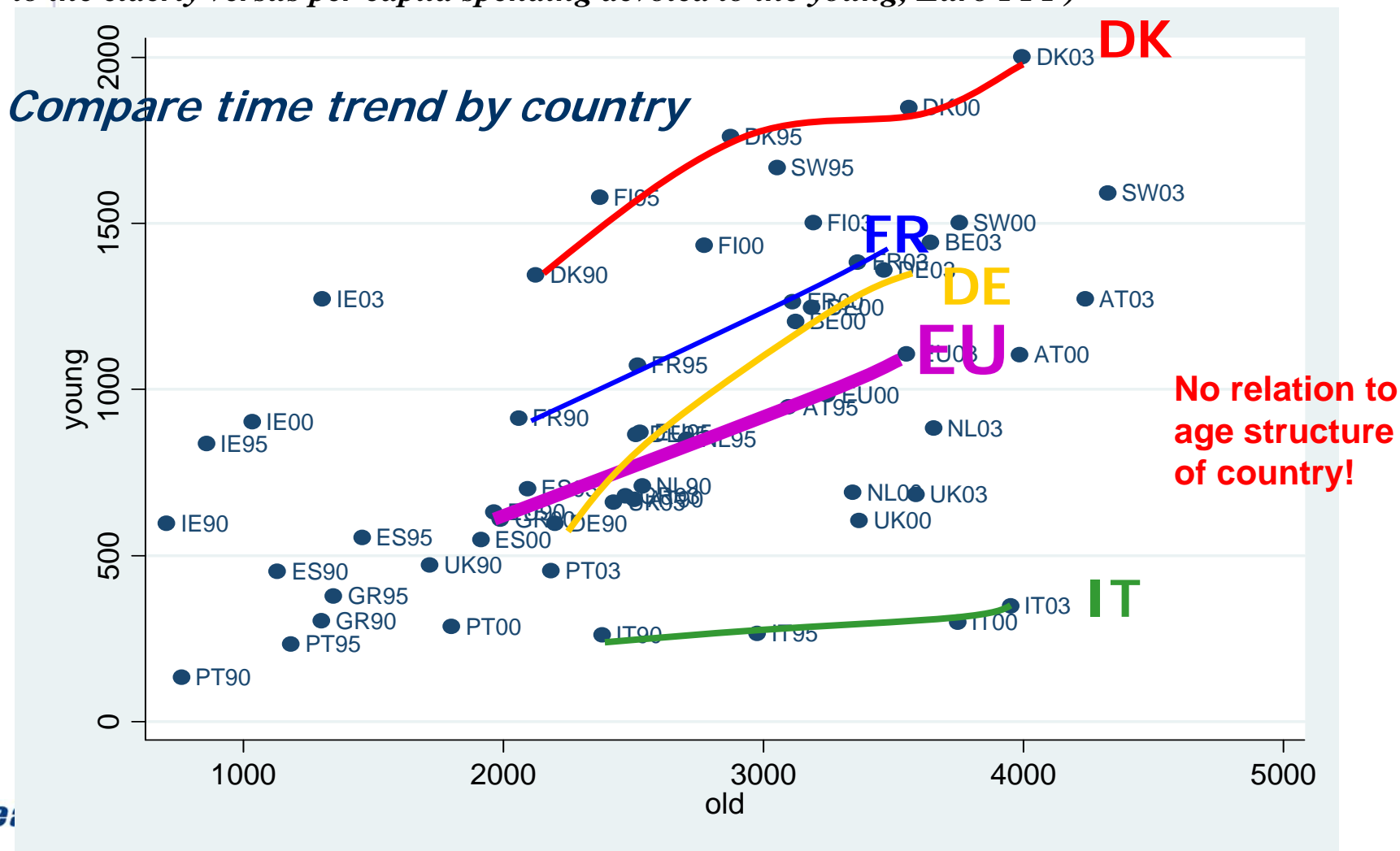


...for the young!



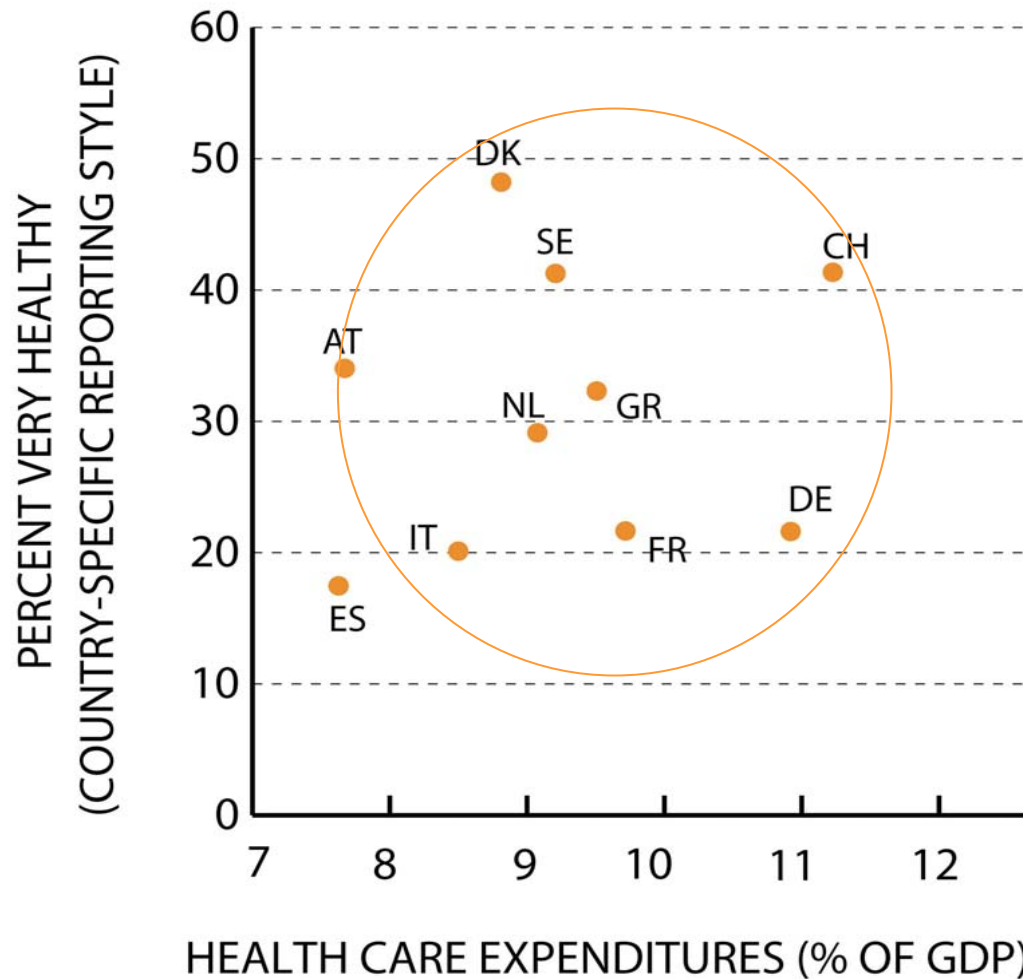
Example 3: Does spending for the old crowd out spending for the young?
(Börsch-Supan and Reil-Held)

Figure 11: Relative Generosity to the Elderly vs. the Young (Expenditure per capita devoted to the elderly versus per capita spending devoted to the young, Euro PPP)





*Example 4: The effect of health care spending on health status
(Hendrik Jürges)*





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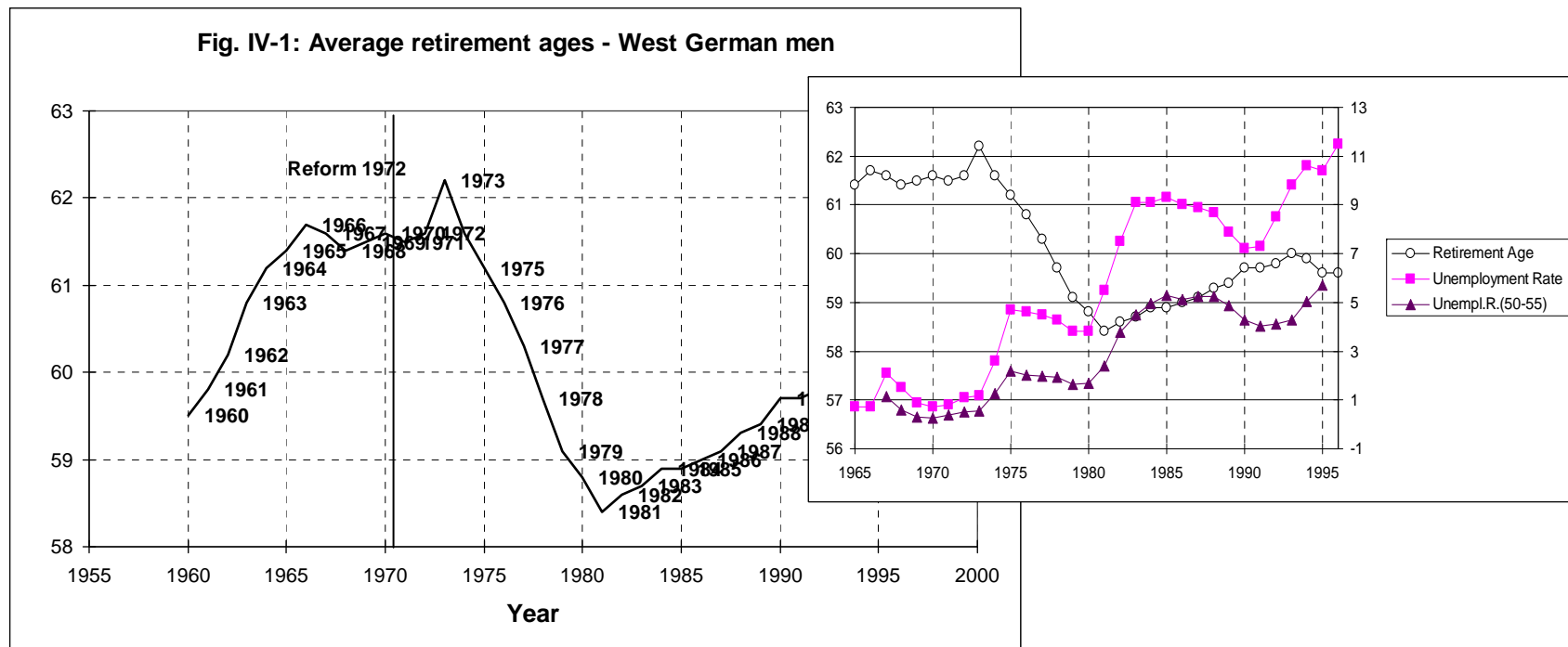


- ▶ **Macro evidence needs micro foundation:**
 - usually many other influential variables
 - aggregates almost always simultaneously determined
- ▶ **Gold standard** (laboratory experiments) usually **not an option** for policy evaluation
- ▶ **Even in micro data: selectivity and reverse causality**
 - time as strongest instrument: **longitudinal panel data**
 - policy changes (“regression discontinuity designs”)



Example 1: Negative incentive effects of pension provisions on early retirement (Börsch-Supan/Schnabel)

1. **Cross-national comparisons** with covariates and fixed effects (elaborated diff-in-diff)
2. Exploit specific „**historical experiments**“



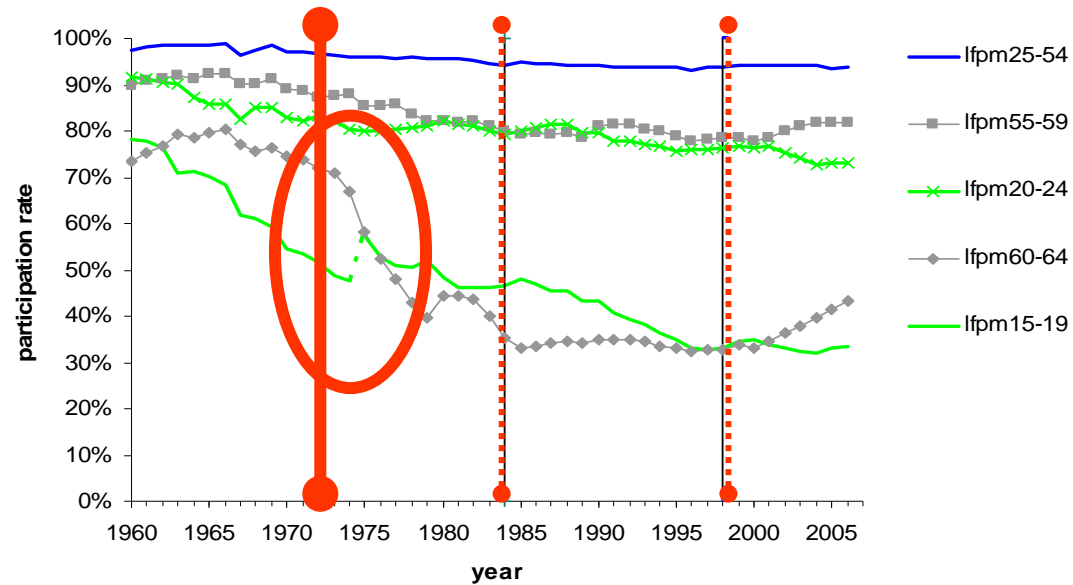
3. **Combine both approaches**



Example 2: The lump of labor fallacy (Börsch-Supan/Schnabel 2010)

Figure 6: Labor Force Participation of youth, young and elderly males

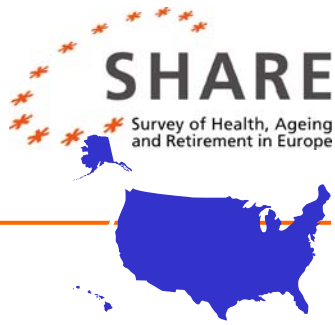
Shocks to the system: 1972, 1984 and 1997



Source: German Mikrozensus



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Survey in 20 European countries plus associates

Wave 1 participation (2004):

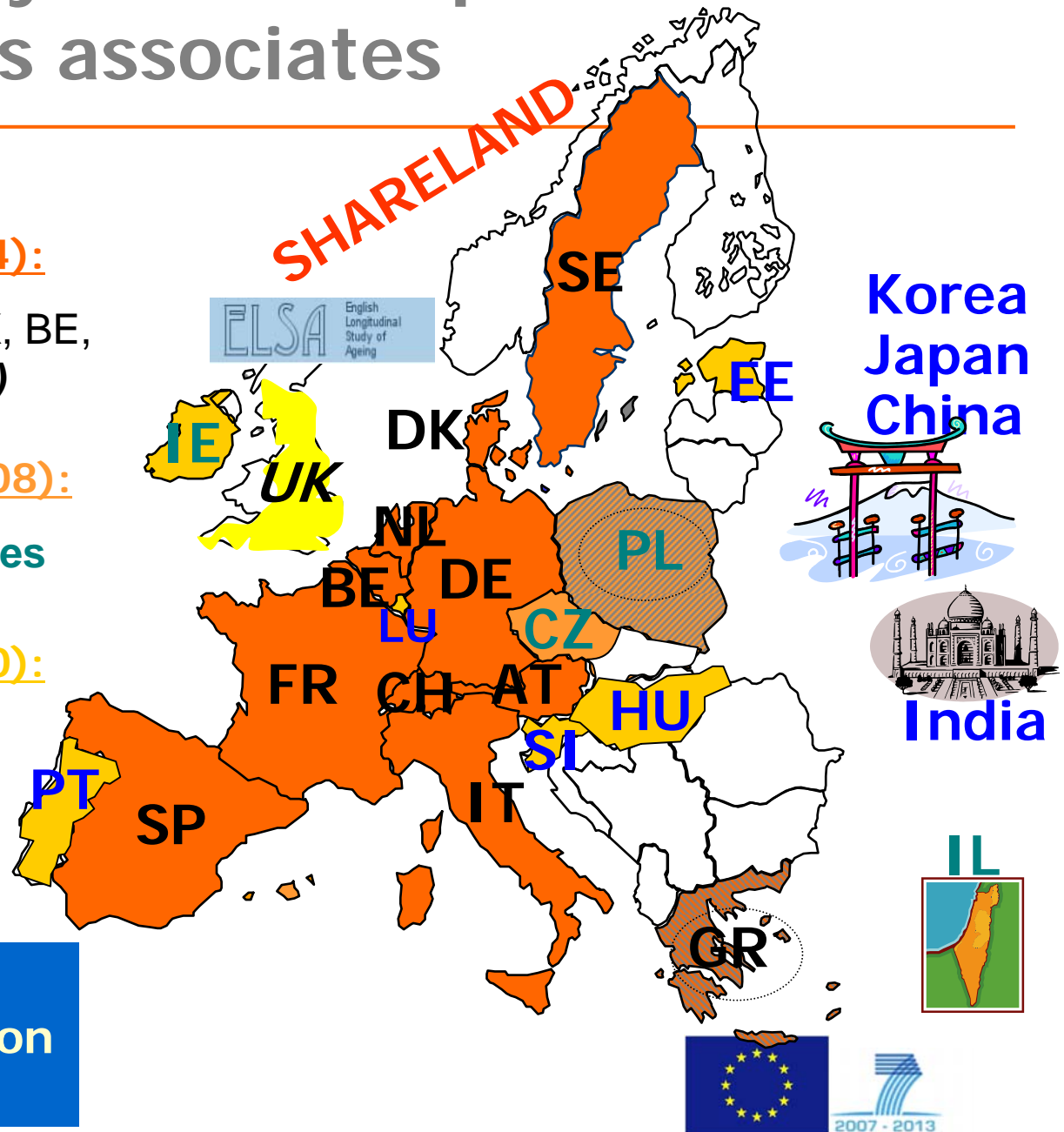
11 countries: NL, DE, AT, DK, BE, FR, CH, SP, IT, GR, SE (+UK)

Waves 2 and 3 (2006 and 08):

plus CZ, PL, IE, IL: **15 countries**

Wave 4 participation (2010):

plus EE, LU, HU, SI, PT:
now **20 countries**



**The SHARE-ERIC:
International organization
modelled after CERN**

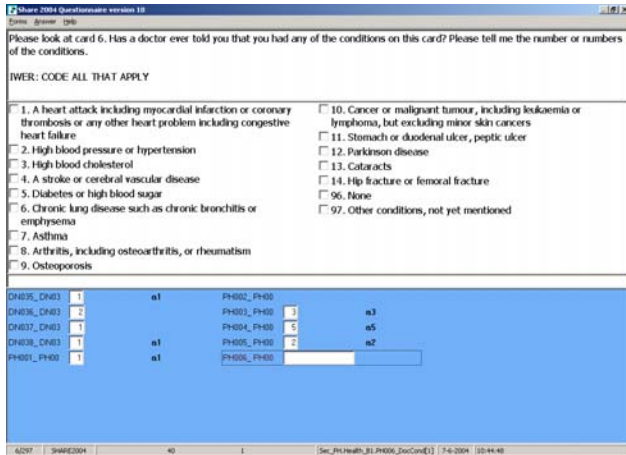
Europe as Laboratory

Survey of Health, Ageing and Retirement in Europe

- **Main aims:** Understand the **ageing process** in Europe on the **individual** and the **societal** level: Basic research and fact-based policy development
- **Principle 1:** Use **cross-national variation** in policies, histories, cultures to understand causes and effects of welfare state interventions
- **Principle 2:** Understand the **interactions** between health, labour force participation, and institutional conditions
- **Principle 3: Longitudinal** – since ageing is a process, not a state

Distinguish methodological effects
from genuine policy effects:

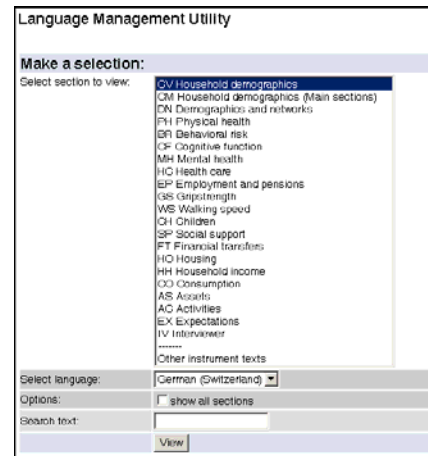
- Different languages
- Different institutions
- Different interpretations
- Different methods



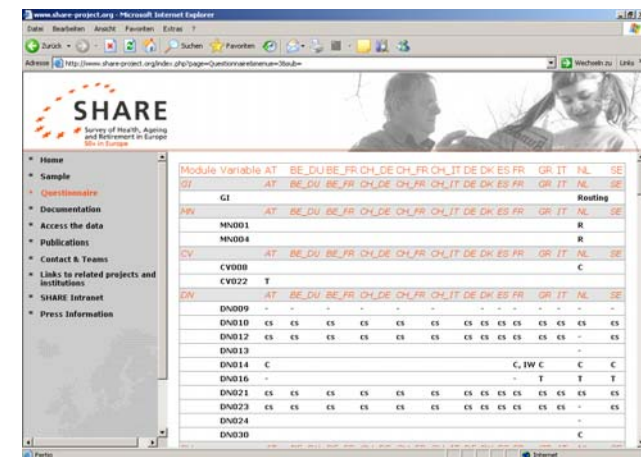
➤ Generic survey instrument to conduct Computer Assisted Personal Interviews (CAPI)



➤ Internet based translation tool (LMU)

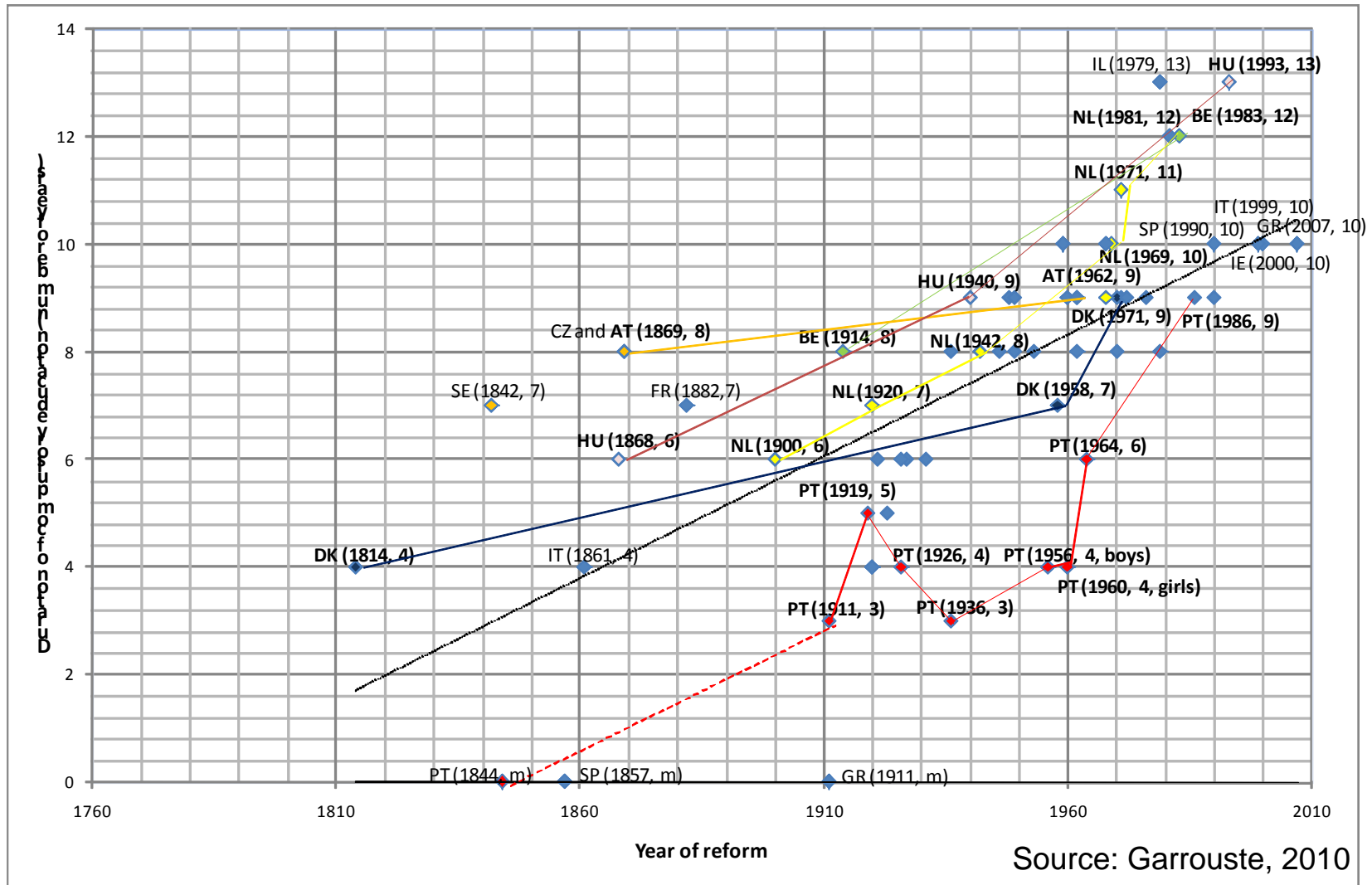


➤ Online overview of country specifics



- ▶ **Contextual database:** institutional data on all areas of the questionnaire
- ▶ Varying not only over countries but also over time
- ▶ **Example: Education Policies** (Christelle Garrouste)
 - ▶ Collects education policies in Europe from 1830s
 - ▶ Lists major reform, both dates and content by pre-primary, primary, secondary, and tertiary school systems

Example: Compulsory Education Reforms



“Would you say your health is ...?”

	<i>Very good</i>	<i>Good</i>	<i>Fair</i>	<i>Bad</i>	<i>Very bad</i>
Austria	18.4	43.6	28.6	7.4	2.1
Germany	11.4	44.8	31.5	10.1	2.3
Sweden	28.7	35.9	25.7	7.7	2.0
The Netherlands	18.4	51.0	24.8	5.0	0.8
Spain	9.7	39.9	33.6	13.1	3.7
Italy	8.4	41.6	37.6	10.2	2.3
France	14.3	50.0	26.5	6.9	2.3
Denmark	25.1	44.4	22.0	5.5	2.9
Greece	23.2	40.9	28.3	6.1	1.6
Switzerland	33.7	46.7	16.5	2.7	0.5

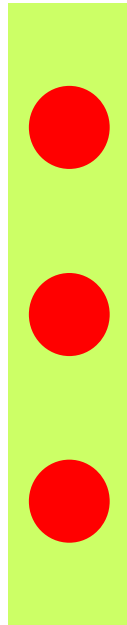


⇒ objective performance measures (e.g. grip strength, walking speed, chair stand, peak flow, biological samples) help distinguishing actual differences in health from different response styles ...

Biomarkers in SHARE



→ e.g. adipositas



→ **HbA1c**
⇒ e.g. diabetes

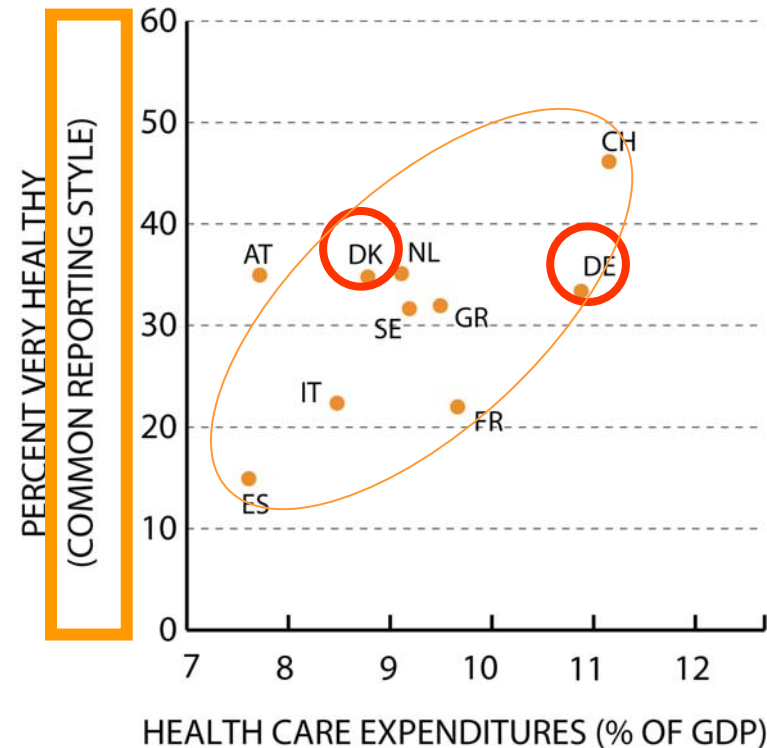
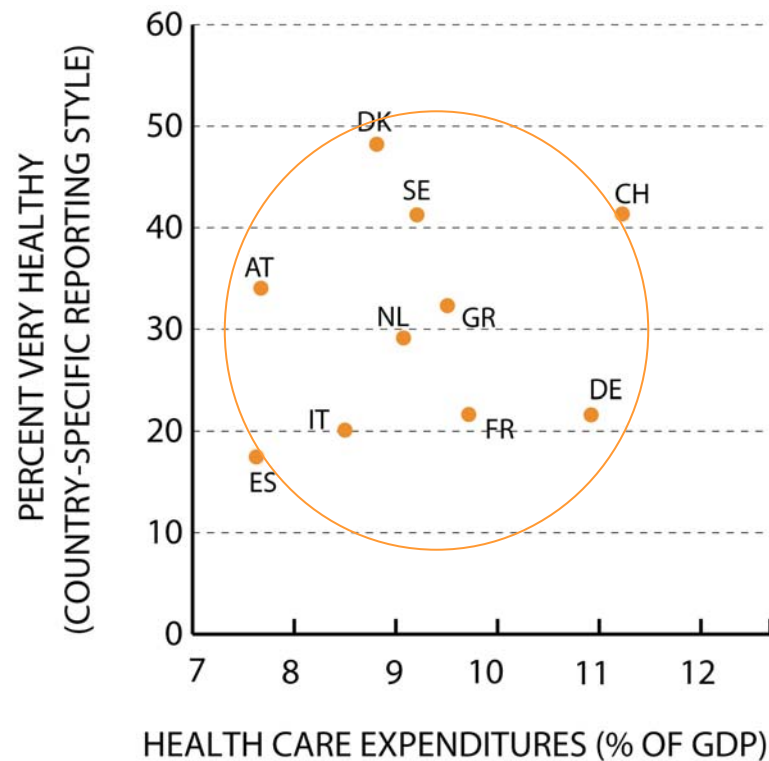
→ **Cholesterol**
⇒ e.g. cardio-vascular diseases

→ **C-reactive protein**
⇒ e.g. cardio-vascular diseases,
acute inflammation, stress



→ e.g. risk of invalidity (ADL),
cardio-vascular diseases, mortality

Example: Reporting styles of general health status indicators



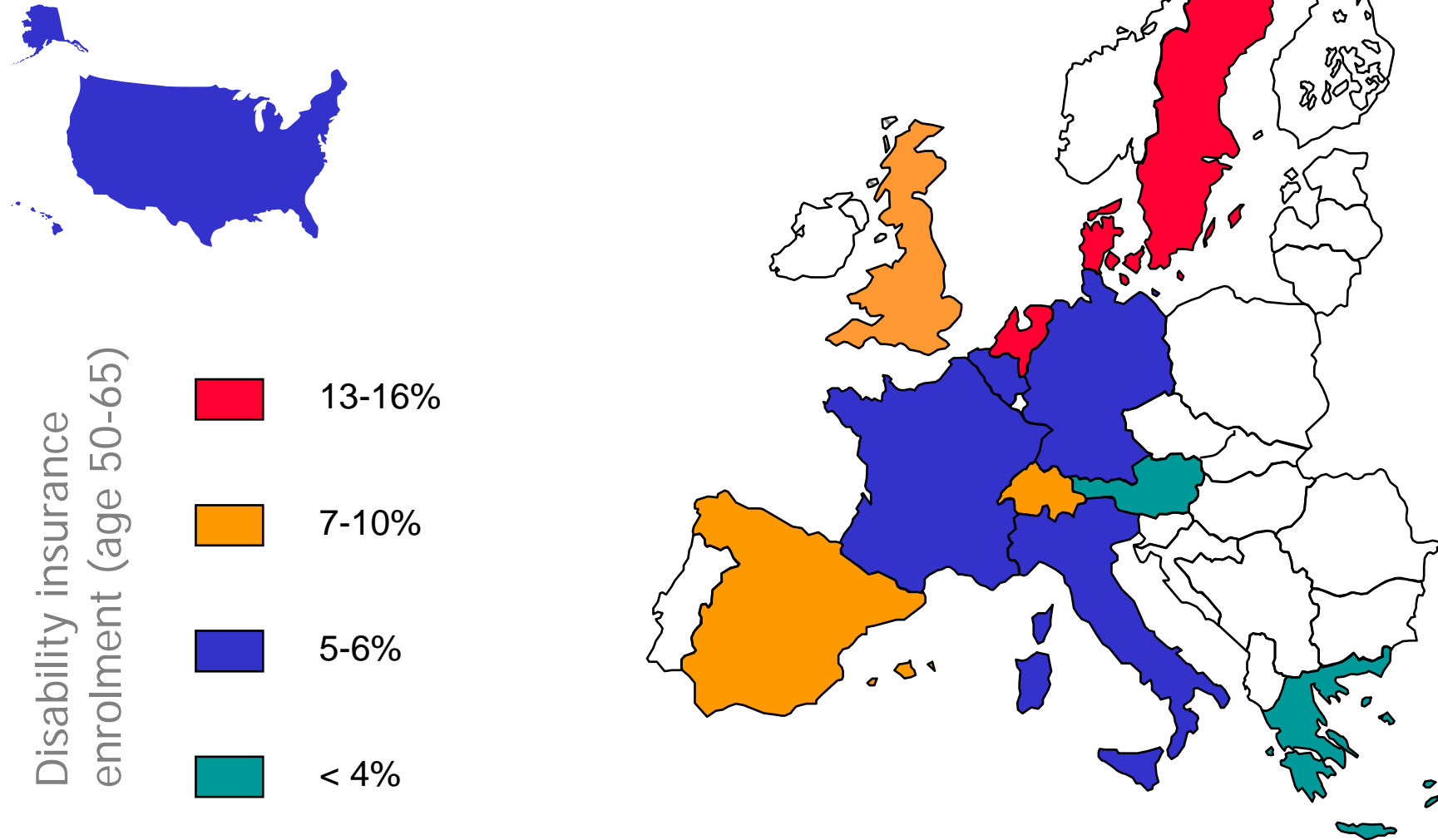
- ▶ **Initial conditions** are important:
 - ▶ Especially health and SES trajectories are driven by childhood experiences
 - ▶ Identify bi-directional health-SES causal linkages
 - ▶ Asking **retrospectively** may not be perfect, but it is better than not knowing anything about the past
 - ▶ **Design** challenges:
 - ▶ What do people remember easily?
 - ▶ How detailed can we be?
 - ▶ Exploit previous **cognitive** research, use **electronic implementation** to help memory:
 - ▶ Life grid representation
 - ▶ Anchoring by using “landmark events”
-



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Cross-national differences in disability insurance enrolment



Source: Axel Börsch-Supan (2006)

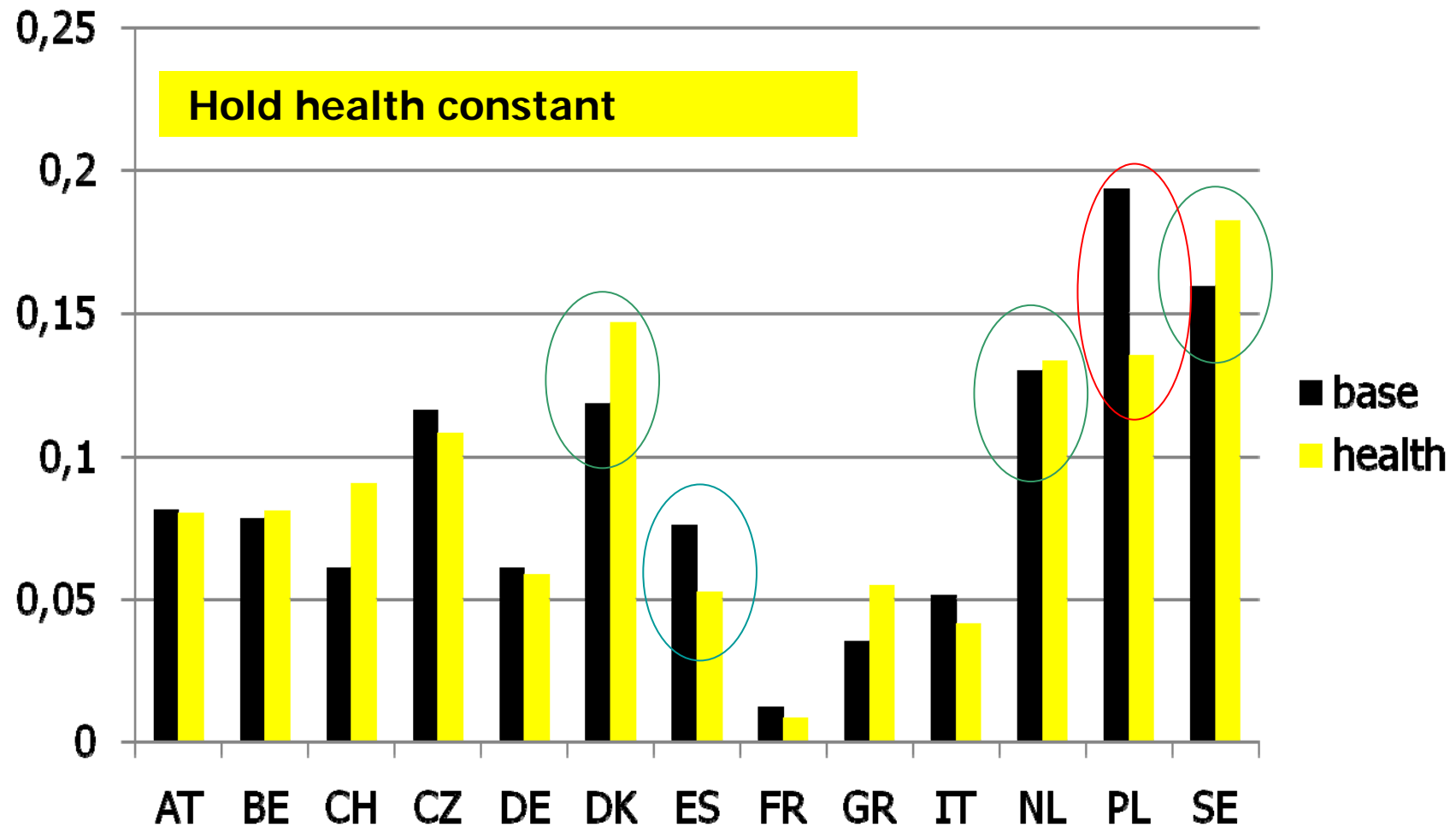
Step 1:

- Relate DI benefit reciprocity rate to (a) demographics, (b) health measures, (c) life course characteristics, and (d) measures of generosity of DI
- **Result: health and age in each country important factors**

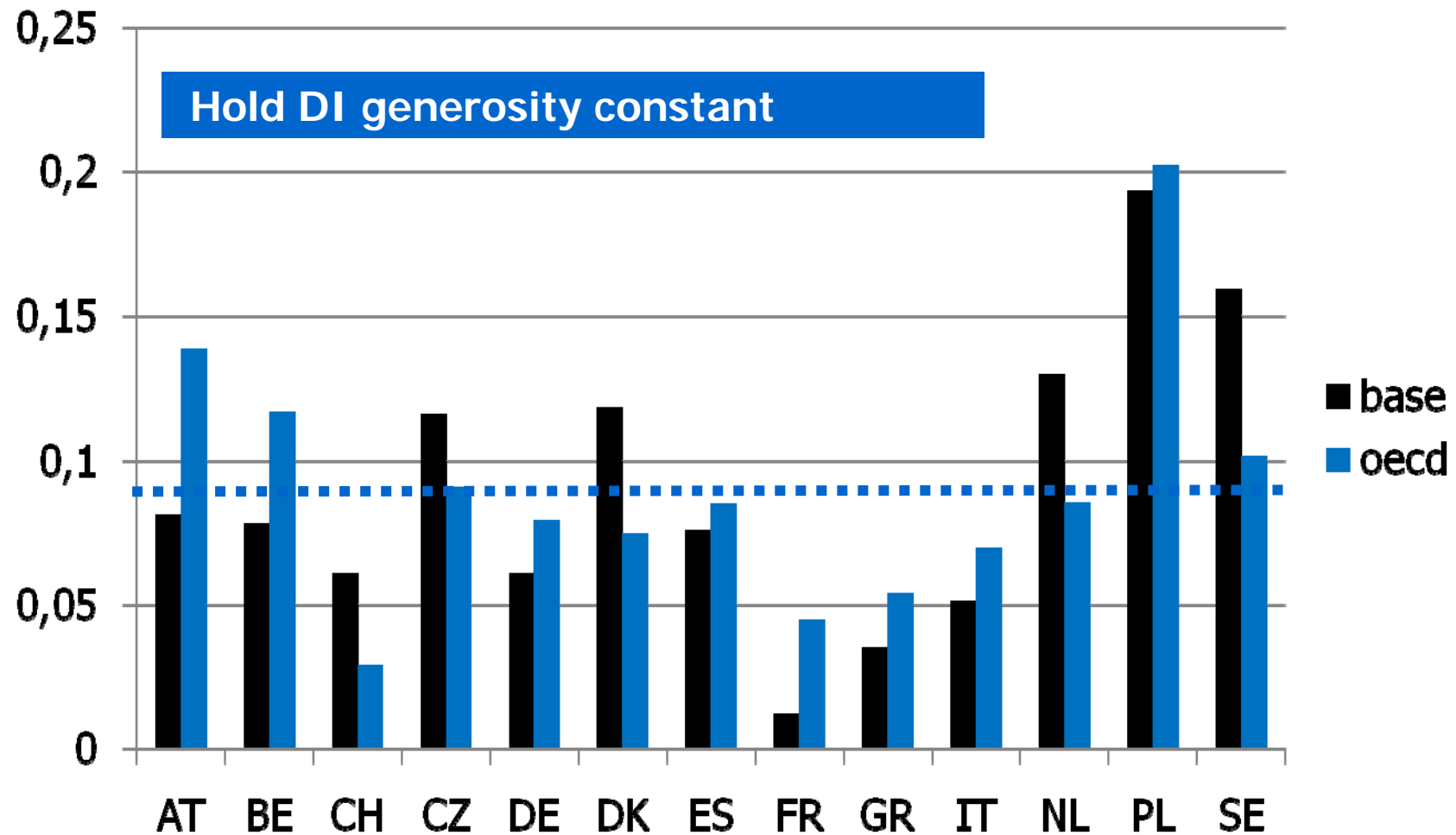
Step 2:

- Hold cross-national differences in (a) demographics, (b) health, (c) life course characteristics, (d) DI generosity constant
- **Result: if (a), (b), (c), or (d) is cause for international difference, then holding it constant should make DI reciprocity in all countries equal**

Simulation of DI benefit recipiency



Simulation of DI benefit reciprocity



International comparisons very powerful in detecting policy effects

- ▶ Substantial harmonization efforts necessary to avoid spurious effects through differences in language, institutions, interpretation, and methods
- ▶ „Historical experiments“ greatly help in identification. Requires genuine panel data, preferably with retrospective dimension
- ▶ Ressources: personnel, foresight, and patience
- ▶ **This is worth it! Examples for powerful results:**
 - Spending money on health care does help
 - Financial incentives drive early retirement
 - Early retirement INcreases youth unemployment
 - Huge side effects of DI in some countries

