



# How international comparisons help to understand population aging: *Lessons from SHARE and its sister studies*

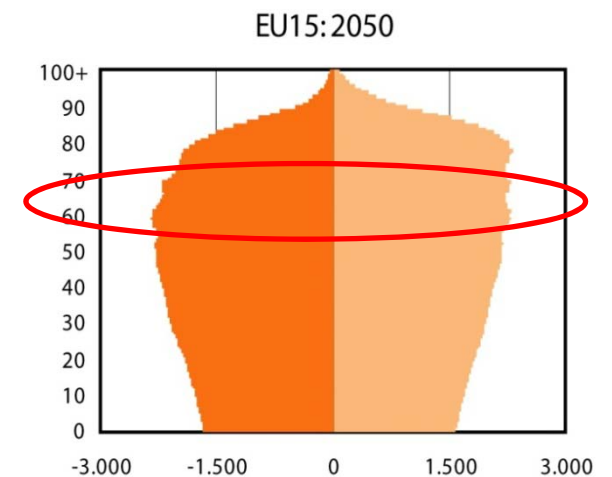
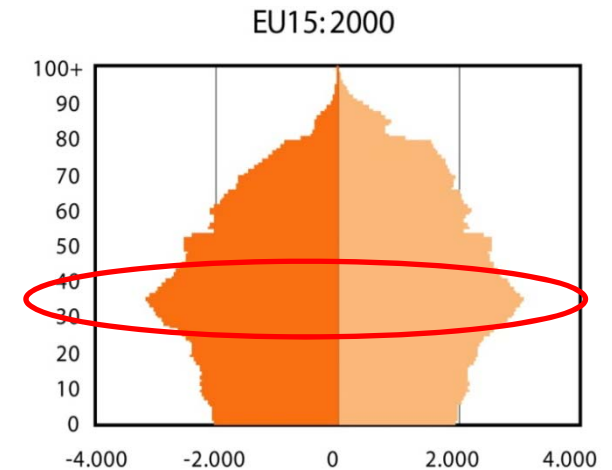
**Axel Börsch-Supan**

*Tokyo, 20th IPDC, 10 July 2014*



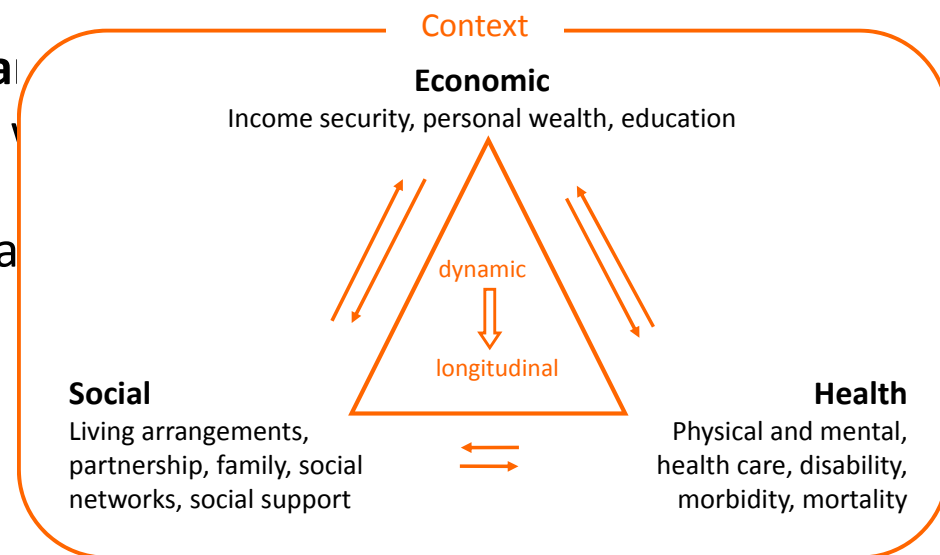
# Background

- ▶ Population ageing is one of *the* challenges of the **21<sup>st</sup> century** affecting:
  - ▶ Pensions, health and long-term care
  - ▶ Economic growth and living standards
  - ▶ Social (esp. intergenerational) cohesion
- ▶ Financial, debt and economic **crises have made matters worse**
- ▶ **Genuine EU challenge**, not only member states
- ▶ Requires **monitoring and benchmarking**
- ▶ **International comparisons** are eye-opener....
- ▶ ...and **age 50+** shows accumulation of welfare state interventions over the life-course: health, wealth, and social networks: **a magnifying glass**



# Aims & principles

- Aim:**
  - Understand the **ageing process** in Europe (**individual** and **societal** level)
  - Basic research and fact-based policy development
- Principle 1:** Understand the **interactions** between health, labour force participation, and institutional conditions
- Principle 2:** Use **cross-national** variation to understand causes and effects of
- Principle 3: Longitudinal** – since a



# Methodology

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- ▶ Representative samples of **individuals age 50+** with spouse
- ▶ **Face-to-face interviews** by trained interviewers
- ▶ Broad range of **questions, measurements and tests:**
  - ▶ **Health:** subjective-objective (self-report, ADL/IADL, conditions, physical performance, biomarkers), physical-mental (cognition, MMSE, CES-D, Euro-D), health behaviors, health utilization and insurance coverage
  - ▶ **Socio-economic status:** labor force participation, retirement, income (amount and sources), wealth, consumption, pension claims, expectations, well-being
  - ▶ **Social participation:** activities (volunteering), family and social networks (size and intensity), help (time, money)



# EU Laboratory to evaluate social policies Global



## 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 3 specialty: SHARELIFE histories

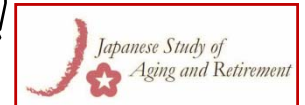
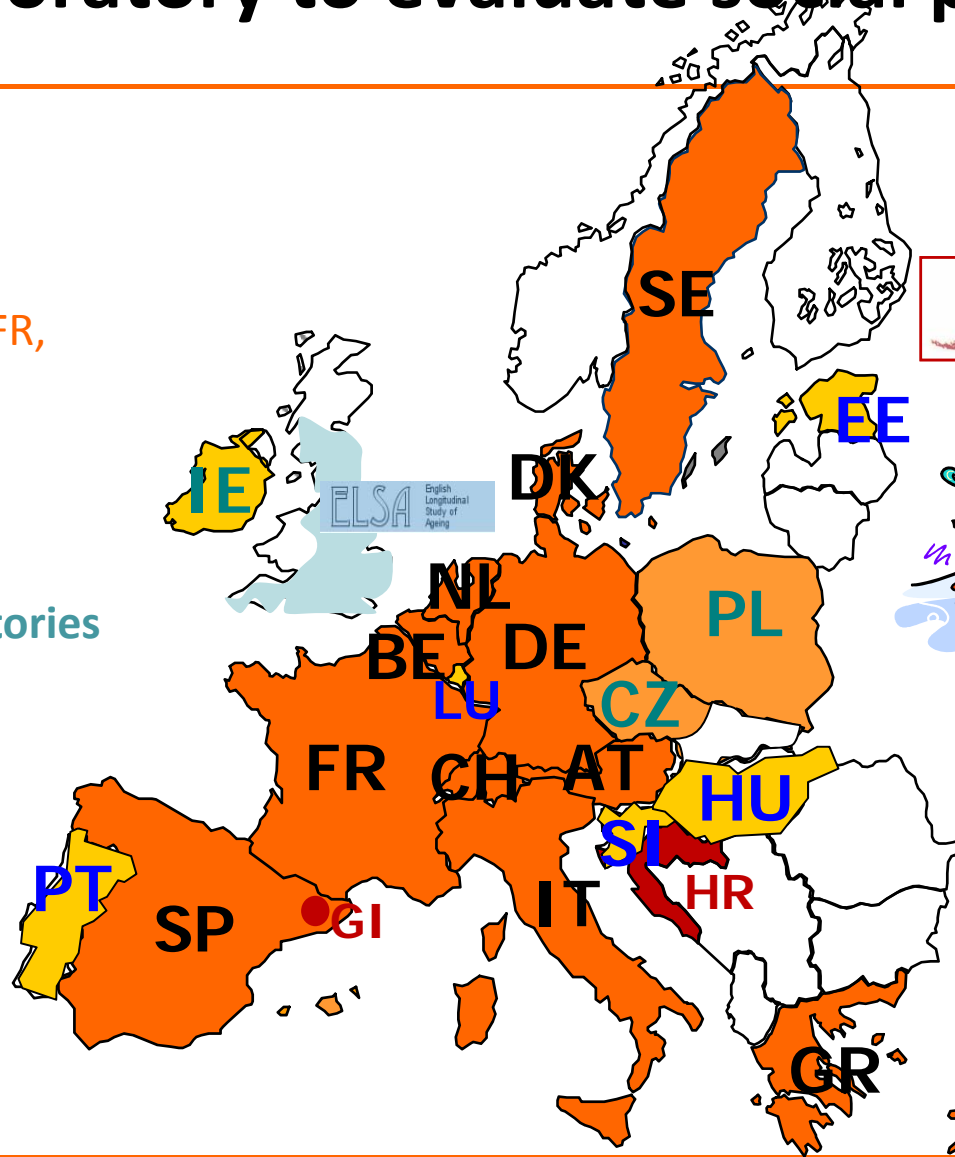
## Wave 4 participation (2010):

plus EE, LU, HU, SI, PT:

now 20 countries

## Wave 5 just finished (2012/13)

83,000 resps, 230,000 interviews  
from 21 countries/1 region



Korea  
China



India



Mexico, Brazil,  
Argentina



Federal Ministry  
of Education  
and Research

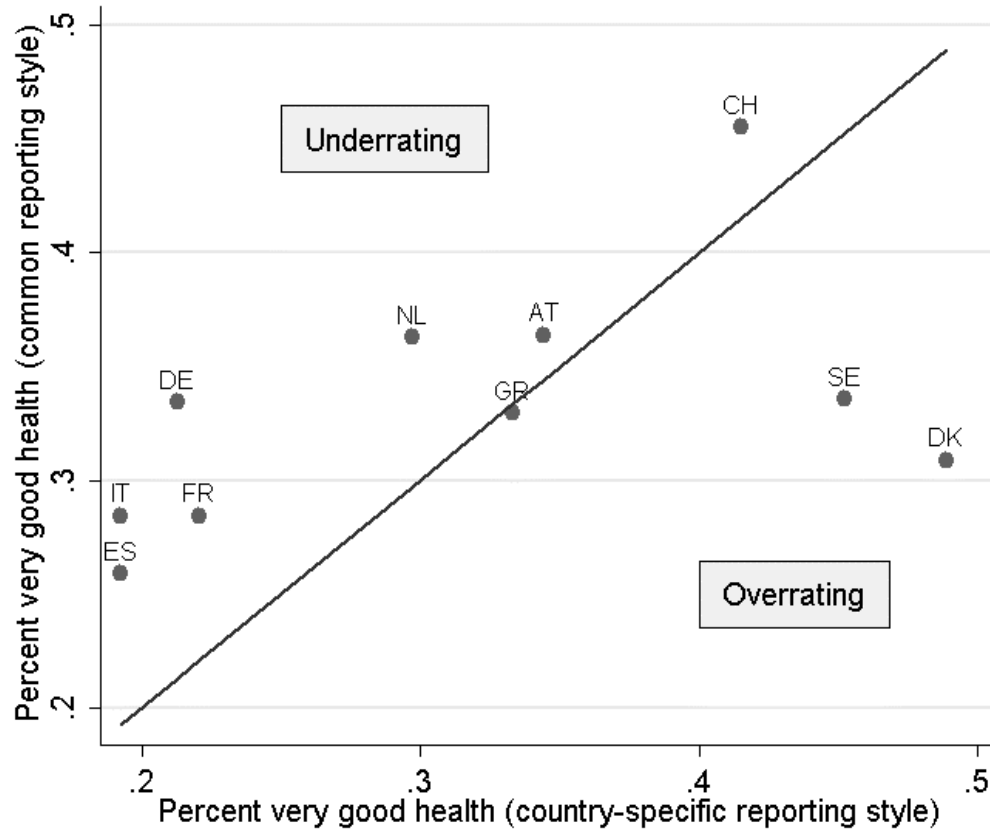
National Institute  
on Aging

## Distinguish methodological effects from genuine policy effects:

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

Ex ante/ex post  
harmonization

# Different interpretations



Source: Jürges, 2006



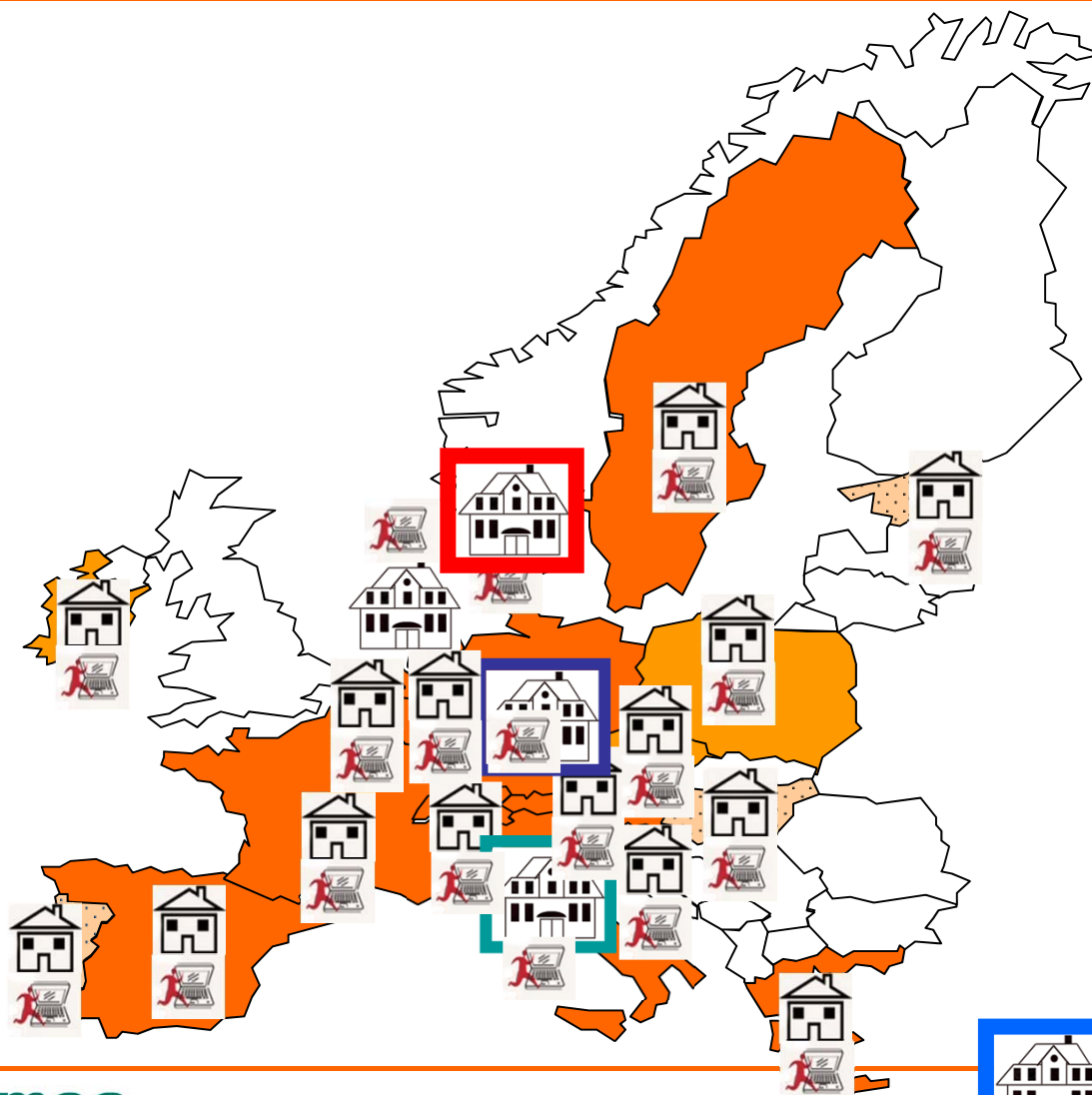
VolkswagenStiftung DFG  
National Institute  
on Aging ■ ◆ ★ ✨

objective measures of health help distinguishing actual differences in health from different response styles to extract genuine policy effects

- ▶ Ageing is a **process in historical time**: observe the same people over a long stretch of time, note changes
- ▶ But: much more difficult than cross-sectional
  - ▶ Long-term view: **retain same people**
    - ▶ in spite of fatigue and repetitiveness
  - ▶ **Complexity of households**:
    - ▶ movers, separations, nursing home, death and its circumstances
  - ▶ Interview is dependent on responses from previous wave(s)
    - ▶ questionnaire is **very complex** and **software** driven



# Organisational challenges of a fully distributed RI



5 main nodes



22 country scientific partner  
institutions & 150+ scientists



24 independent survey  
agencies & about 2000 mostly  
free-lance interviewers

Synchronized schedule  
Central data base management  
Technical infrastructure  
Many meetings & Internet



# Data use and publications



# Selected new publications 2013

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## ▶ Health & Health Care

- ▶ Paccagnella, O., V. Rebba and G. Weber. **Voluntary private health care insurance** among the over fifties in Europe: A comparative analysis of SHARE data. Health Economics.
- ▶ Schröder, M. **Jobless now, sick later?** Investigating the long-term consequences of involuntary job loss on health. Advances in Life Course Research.

## ▶ Life Course

- ▶ Deindl, C. The influence of **living conditions in early life on satisfaction in old age**. Advances in Life Course Research.
- ▶ Schaan, B. **Widowhood and depression** among older Europeans - the role of gender, caregiving, marital quality, and regional context. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences.

# Selected new publications 2013

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## ▶ Retirement

- ▶ Reinhardt, J.D., M. Wahrendorf and J. Siegrist. Socioeconomic position, **psychosocial work environment and disability** in an ageing workforce. Occupational and Environmental Medicine.
- ▶ Brugiavini, A., G. Pasini and E. Trevisan. The direct **impact of maternity benefits** on leave taking: Evidence from complete fertility histories. Advances in Life Course Research.
- ▶ Börsch-Supan, A., and M. Schuth, **Early retirement, mental health and social networks**, In: David A. Wise (ed.), Discoveries in the Economics of Aging, University of Chicago Press.

## ▶ Socio-Economics

- ▶ Chen, M.K. The effect of **language on economic behavior**: Evidence from savings rates, health behaviors, and retirement assets. American Economic Review.

# Selected new publications 2013

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## ▶ Family & Social Networks

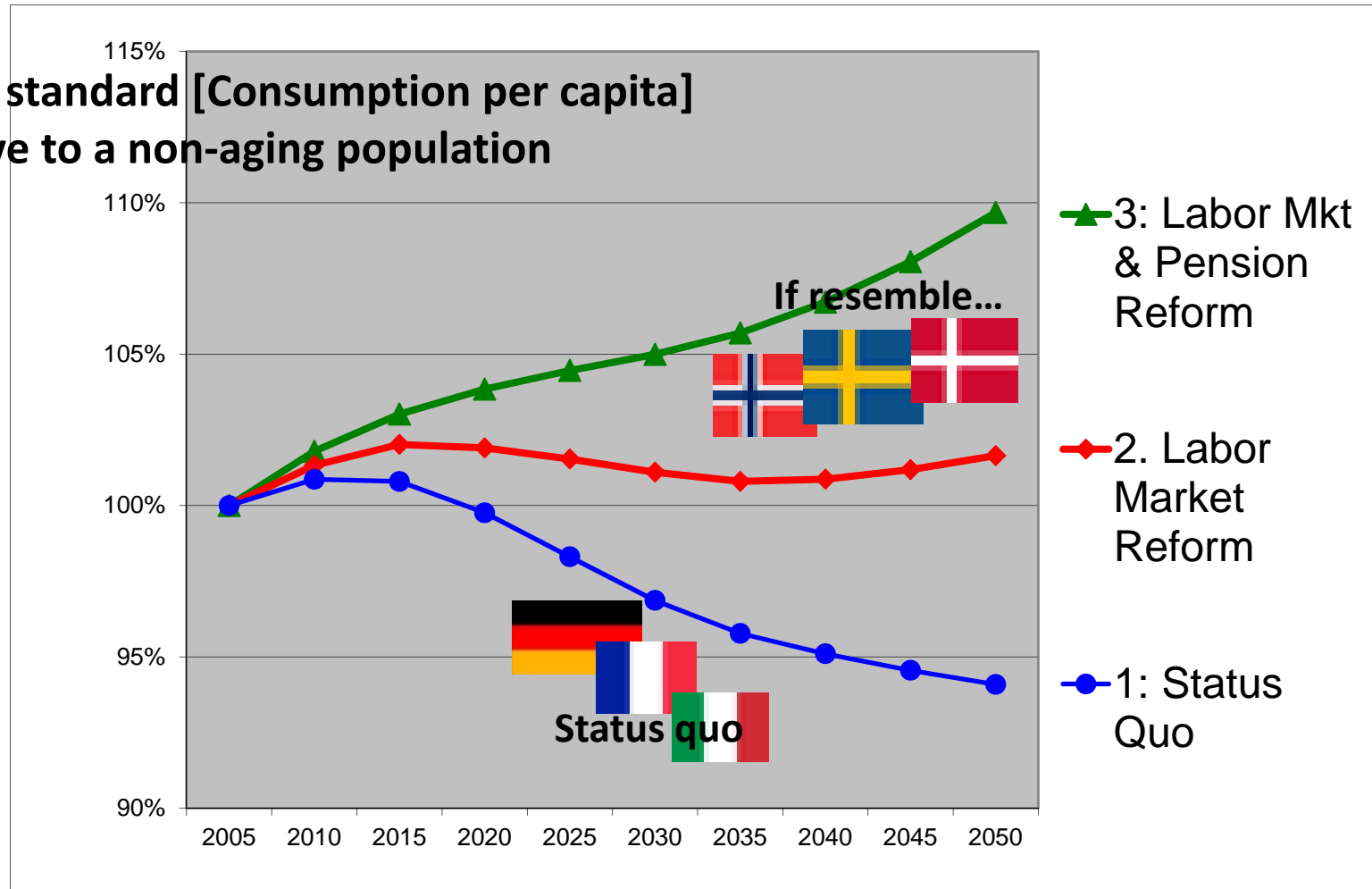
- ▶ Lyberaki, A., Tinios, P., Mimis, A. and Georgiadis, T. Mapping population aging in Europe: how are **needs met by different family structures?**. Journal of Maps.
- ▶ Reinhold, S., T. Kneip and G. Bauer. The long run consequences of unilateral **divorce laws on children** — evidence from SHARELIFE. Journal of Population Economics.
- ▶ Brandt, M. and C. Deindl. **Intergenerational transfers** to adult children in Europe: Do social policies matter? Journal of Marriage and Family.



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# Background: Structural reforms

**Living standard [Consumption per capita] relative to a non-aging population**

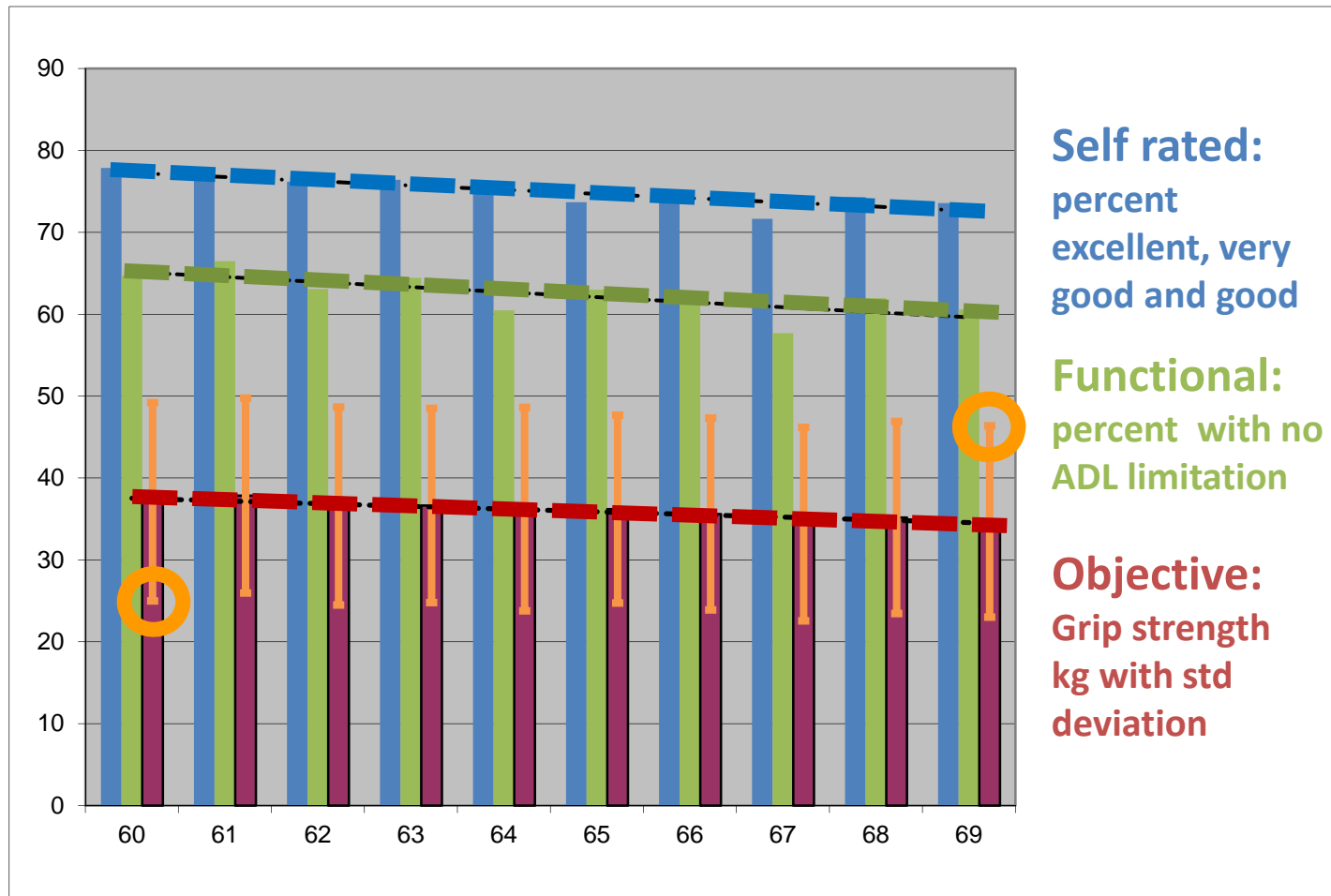




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# Myth 1: Health is insufficient...

## Health at age 60-69 in Europe



**Self rated:**  
percent  
excellent, very  
good and good

**Functional:**  
percent with no  
ADL limitation

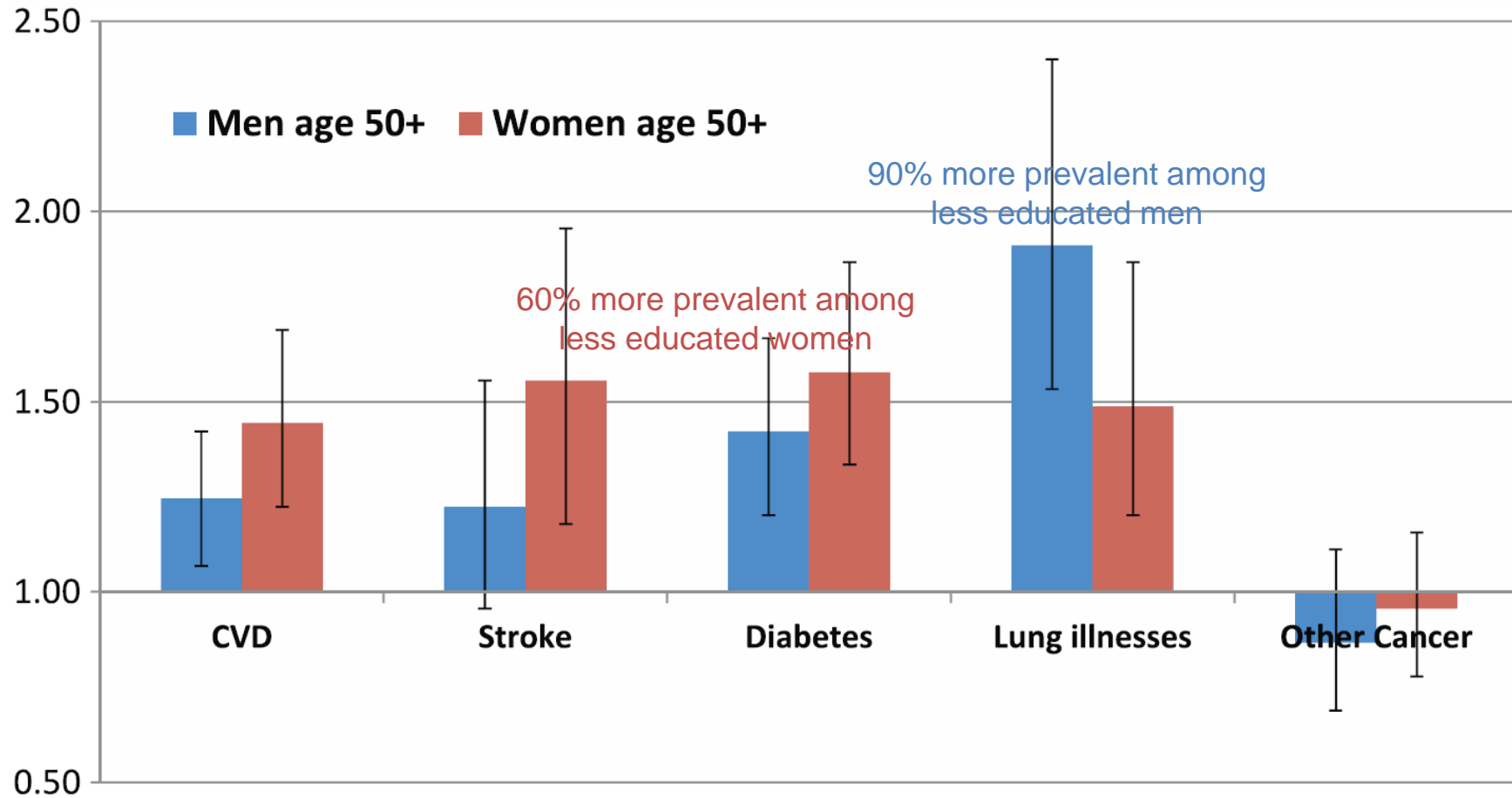
**Objective:**  
Grip strength  
kg with std  
deviation





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# Myth 1: Health is insufficient...



**Fig. 5.** Relative frequencies of illnesses by education in Europe. Source: Avendano et al. (2005)

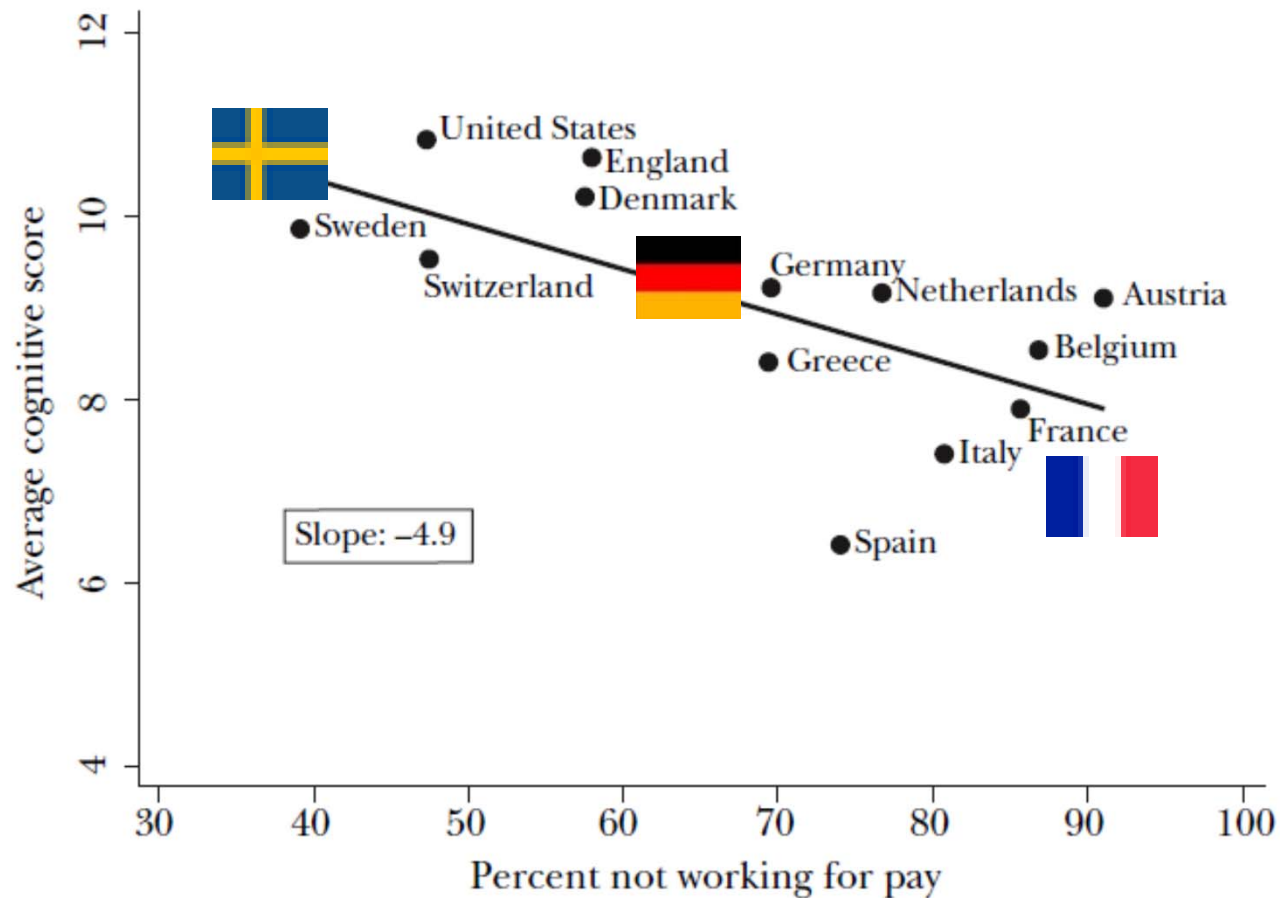




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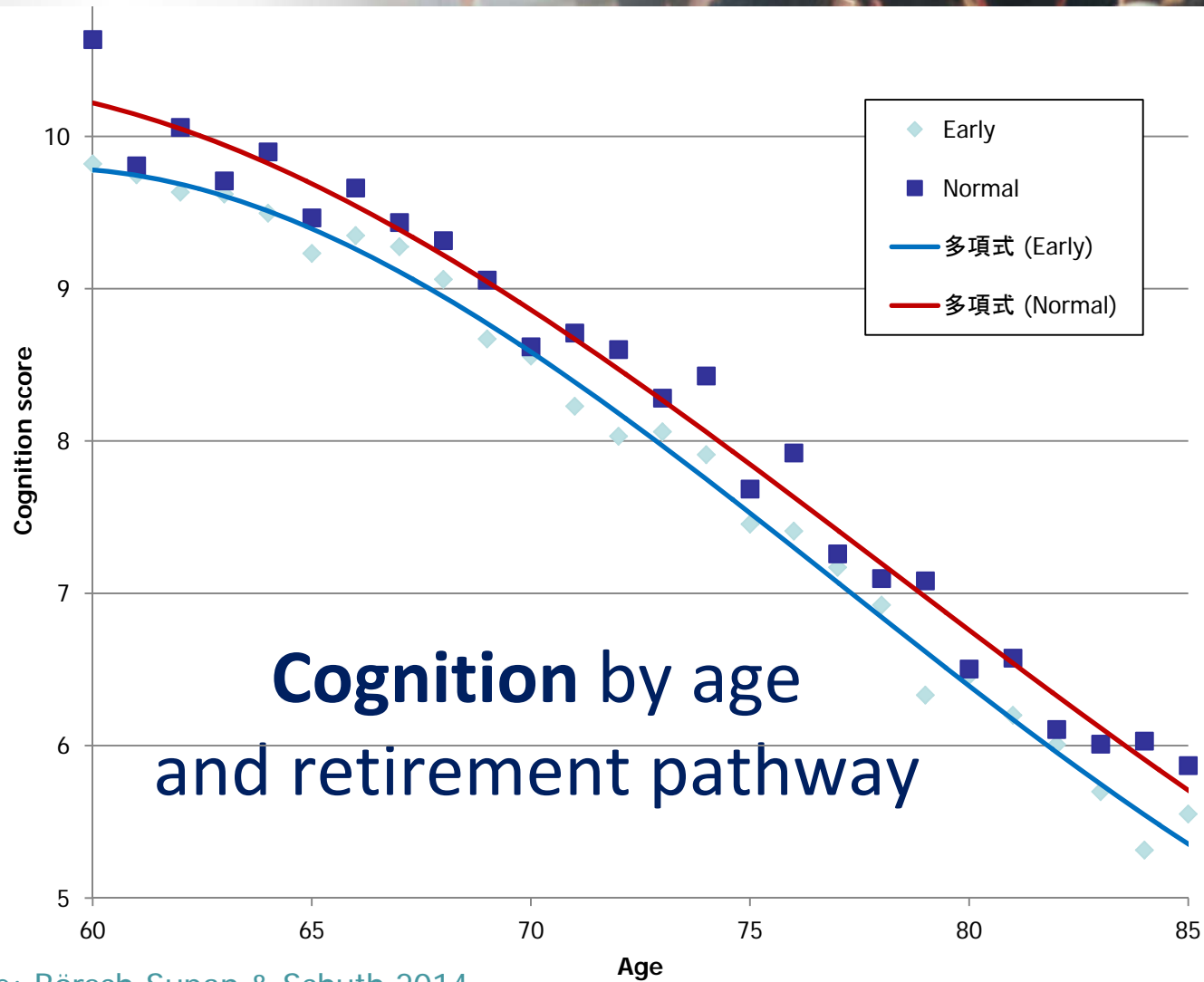
# Myth 2: Is retirement really bliss?

Cognition by Percent Not Working for Pay, 60–64 Year-Old Men and Women,  
Weighted  
(Rohwedder and Willis 2010 with SHARE data)





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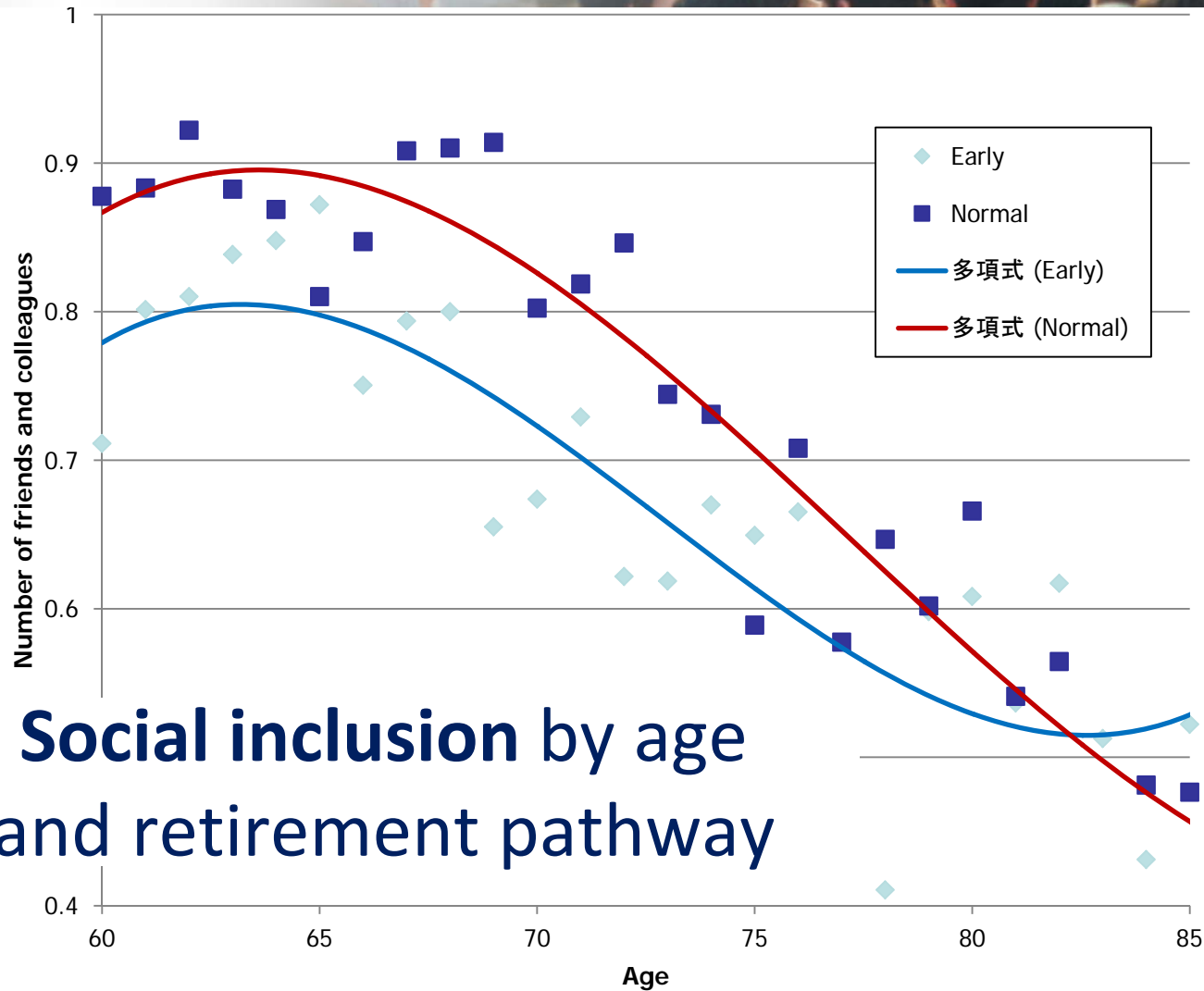


Source: Börsch-Supan & Schuth 2014





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## Social inclusion by age and retirement pathway

Source: Börsch-Supan & Schuth 2014



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## What is cause, what is effect?

### 1. Cognition -> Retirement:

Those with low cognition tend to retire earlier

### 2. Retirement -> Cognition:

Those who retire earlier lose their cognition faster

### 3. Cognition -> Social networks:

Smart and successful individuals have more friends

### 4. Social networks -> Cognition:

Those who retire earlier lose their friends faster

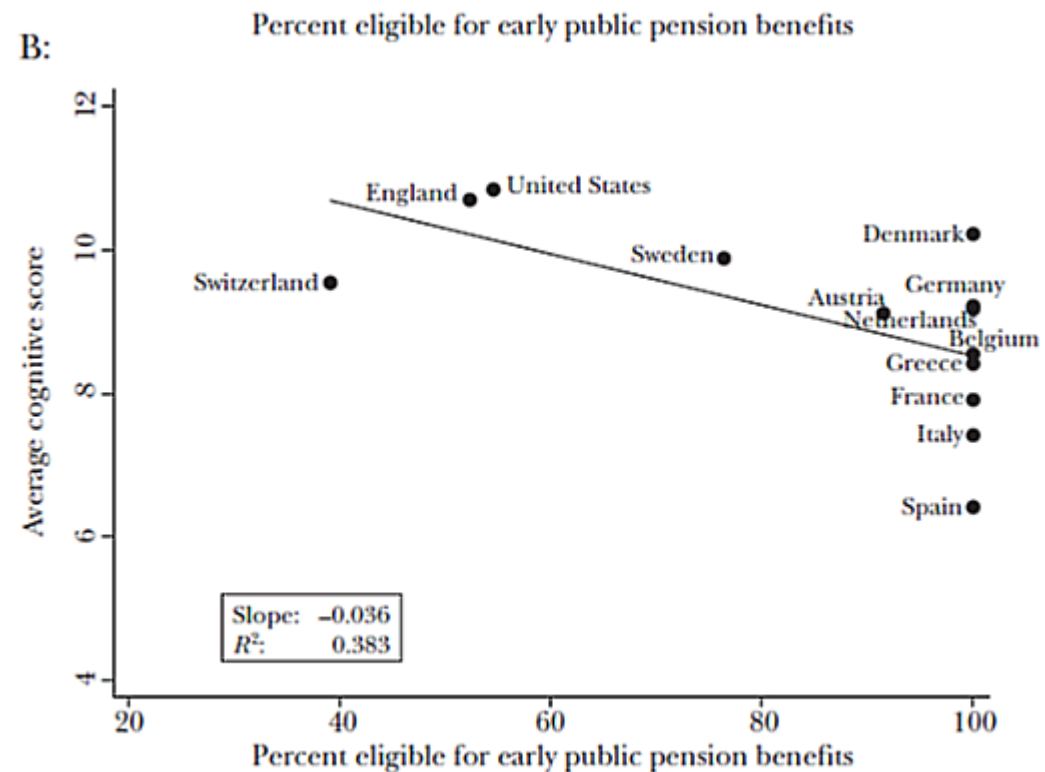
# Identification strategy 1: RET

Instruments for years since early retirement:

- ▶ Time since eligible for early retirement
- ▶ Time since eligible for normal retirement

*Causal effect:*

*Exploit variation of early retirement rules in SHARE countries*



Instruments for number of non-family members in the social network:  
“social capital” at the regional level (NUTS-1)

1. **Trust in other people among the population 50+**
  - ▶ separated by country and gender
  - ▶ Higher level of (aggregated) trust -> more social contacts
  
2. **Population density at national level**
  - ▶ Higher population density -> more non-family social contacts?
  - ▶ Higher population densities create public distrust and increases need for privacy (Brueckner & Largey 2006, Collier 1998)

## Second stage: RET & SN -> COG

**Table 10:** Second stage IV-estimation:  
The effect of (early) retirement and social networks on cognition

	(1) cogn	(2) cogn	(3) cogn	(4) cogn
ERdist	-0.218*** (0.027)	-0.149 (0.099)	-0.259*** (0.084)	-0.185** (0.088)
NRdist	-0.138*** (0.012)	-0.106 (0.065)	-0.172*** (0.052)	-0.120* (0.063)
sn_fc	1.919*** (0.473)	1.177** (0.507)	1.067** (0.512)	1.037** (0.516)
Demographics	No	yes	yes	yes
Health	No	no	yes	yes
Country/age effects	No	no	no	yes
N	19944	19944	18531	18531
F	185.946	272.813	228.672	155.855
Fp	0.000	0.000	0.000	0.000

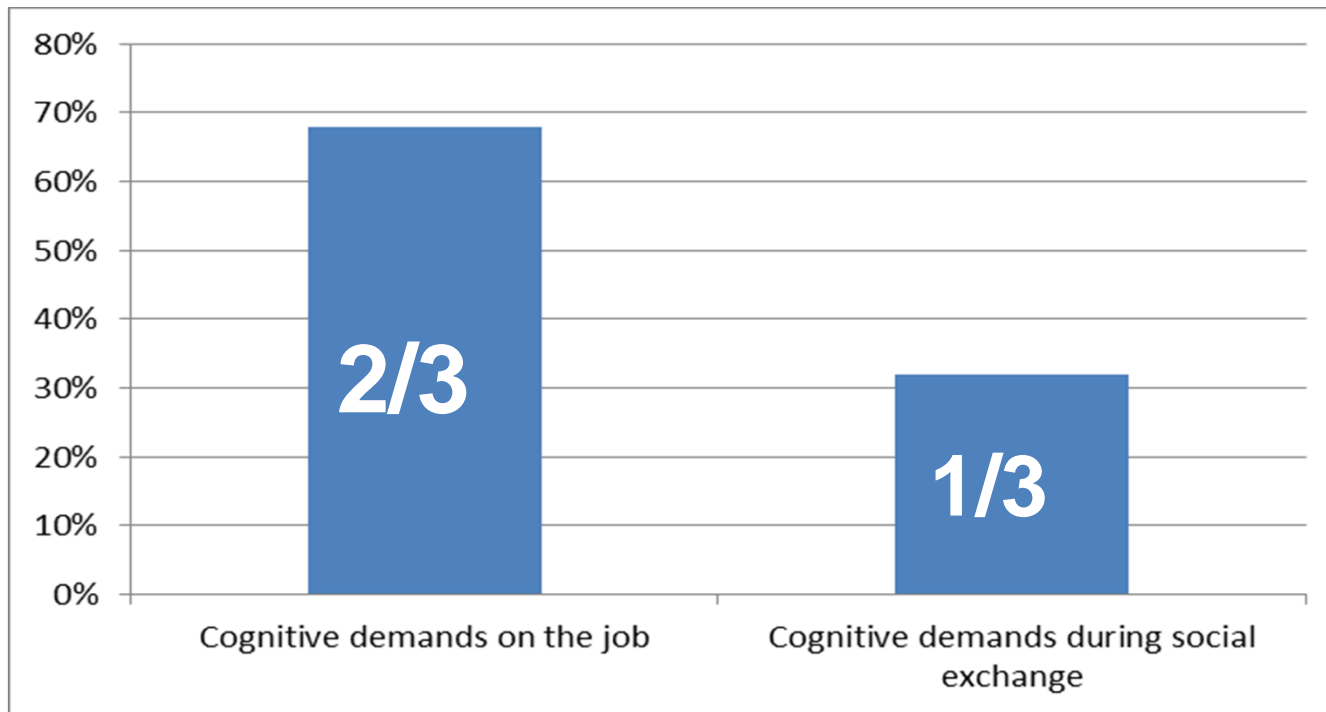
Standard errors in parentheses, \* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Source: Börsch-Supan & Schuth 2014



## Second stage: RET & SN -> COG

### Sources of variation in cognitive aging:



Source: Börsch-Supan & Schuth 2014



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# Conclusions

for the 21st century:

## Active and healthy aging



**Evidence from international comparisons can help** in designing good long-run health care, pension, economic and social policies, and to answer key questions such as:

- Will we resolve the **health care** dilemma?
- Will we be able to adapt the **active part of our life courses** to the new time frame?
- Will we be able to adapt the **retirement part** to the new time frame?
- Will we be able to maintain **intergenerational cohesion** when resource conflicts between generations become clearer?