

### Early Retirement and Subjective Well-being: Evidence from a German Early Retirement Reform

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# What we attempt to do

Main question:

What is the impact of a change in the (early) retirement age on life satisfaction?

Identify by 'quasi natural' experiment from policy reform and survey data.

Q: "On a scale from 0-10, how satisfied are you with your life, all things considered?"





## Motivation

Drive to induce longer working lives across Europe (and beyond):

 Pension reforms, Early retirement reforms, Unemployment benefit rules for older workers

Effects on life satisfaction and health:

- Longer working lives vs. other reforms
- Design and timing of reforms
- Cost-benefit analysis of reforms

Wellbeing and productivity

More general: informative of wellbeing effect of differential treatment

Wellbeing / life satisfaction key outcome variable





# Methodology (1/2)

Causal effect difficult

- Rely on questionnaires, sample sizes, noisy outcome
- Exploit 'severe' German pension reform:
  - For some women born after 1951, early retirement age eligibility changed from 60 -> 63
  - Implemented without phase-in: women born after January 1<sup>st</sup> 1952 subject to new rules.
  - Cost-benefit analysis of reforms

Use discontinuity in eligibility conditions depending on being born on either side of 1<sup>st</sup> January 1952.





# Methodology (2/2)

Not all women affected

• Cannot identify affected individuals in our data

Can use Fuzzy RDD design

- Use indicator I(born after 1<sup>st</sup> Jan 1952) as instrument for being retired in relevant age range
- Know 1<sup>st</sup> stage will work (in principle) from literature
- Outcome is average treatment effect on the treated

Also a DiD approach for robustness.

Reform adopted in 1999 -> only taking effect in 2012.





### Data

SHARE & German SOEP

### Can only use observations in period 2011-2014

Only women born 'around' 1<sup>st</sup> Jan 1952 threshold

(Could have looked at ITT of reform in 1999)





## Results

#### Retirement patterns of 1951 & 1952 cohorts



## Results - baseline



#### Outcome: life satisfaction Instrumental variable estimation

	12 months window			6-month <del>window</del>	Incl health controls	ncl health controls
Retirement	-1.52 (1.81)	-1.37 (1.48)	-0.22 (0.93)	-1.40 (0.86)	-0.92 (1.46)	>
Linear trend	YES	YES	NO	NO	YES	
Quadratic trend	YES	NO	NO	NO	YES	
Education	YES	YES	YES	YES	YES	
Survey year	YES	YES	YES	YES	YES	
IV strength	(WEAK)	(STRONG)	STRONG	STRONG	WEAK	
Observations	1192	1192	1192	695	1192	

## Results - heterogeneity



#### **Outcome: life satisfaction** Instrumental variable estimation (12-months)

	ISC	ISCED <4		ousehold	
		w/ health		w/ health	
Retirement	-1.74* (1.00)	-1.09 (0.80)	-0.60 (1.70)	0.33 (0.86)	
Linear trend	YES	YES	YES	YES	
Quadratic trend	YES	YES	YES	YES	
Education	YES	YES	YES	YES	
Survey year	YES	YES	YES	YES	
IV strength	STRONG	STRONG	STRONG	STRONG	
Observations	775	775	307	307	

## Results – health outcomes



### Lower score = better health

### Measured on 5-point scale: poor to very good



## Results – health outcomes



#### Outcome: Health Instrumental variable estimation (12-months)

	Baseline	ISCED <4	Single Household	
Retirement	-0.16 (1.04)	0.31 (0.57)	0.26 (0.90)	>
Linear trend	YES	YES	YES	
Quadratic trend	YES	YES	YES	
Education	YES	YES	YES	
Survey year	YES	YES	YES	
IV strength	WEAK	STRONG	STRONG	
Observations	1192	775	307	



# Concluding comments



Preliminary results:

- No effect on life satisfaction & health of delayed retirement in full sample
- Similar for individuals with low educational attainment & single household

Work in progress. Still some work to do!





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www.factage.eu





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