Consequences of the increase in the retirement age on occupational disability

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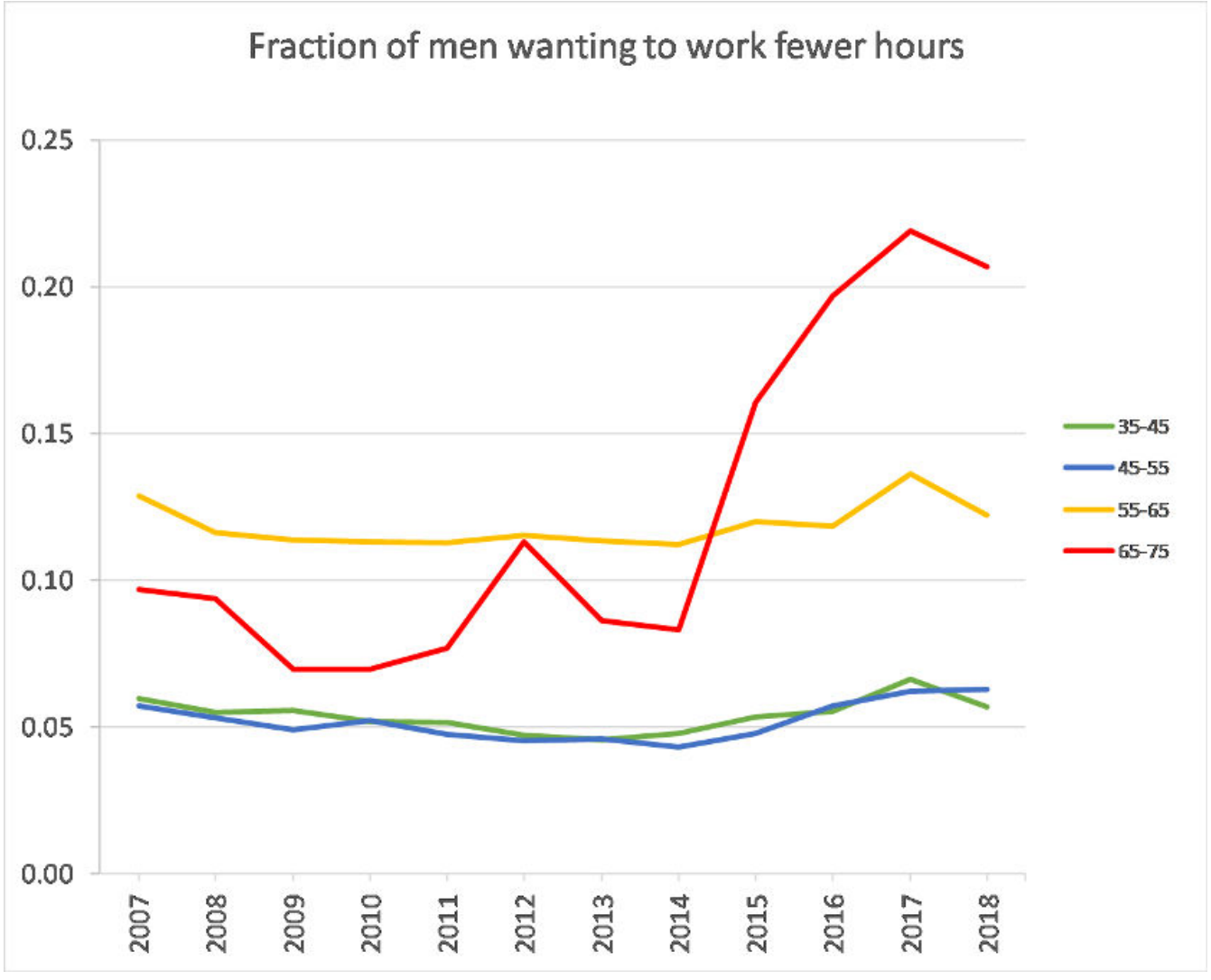
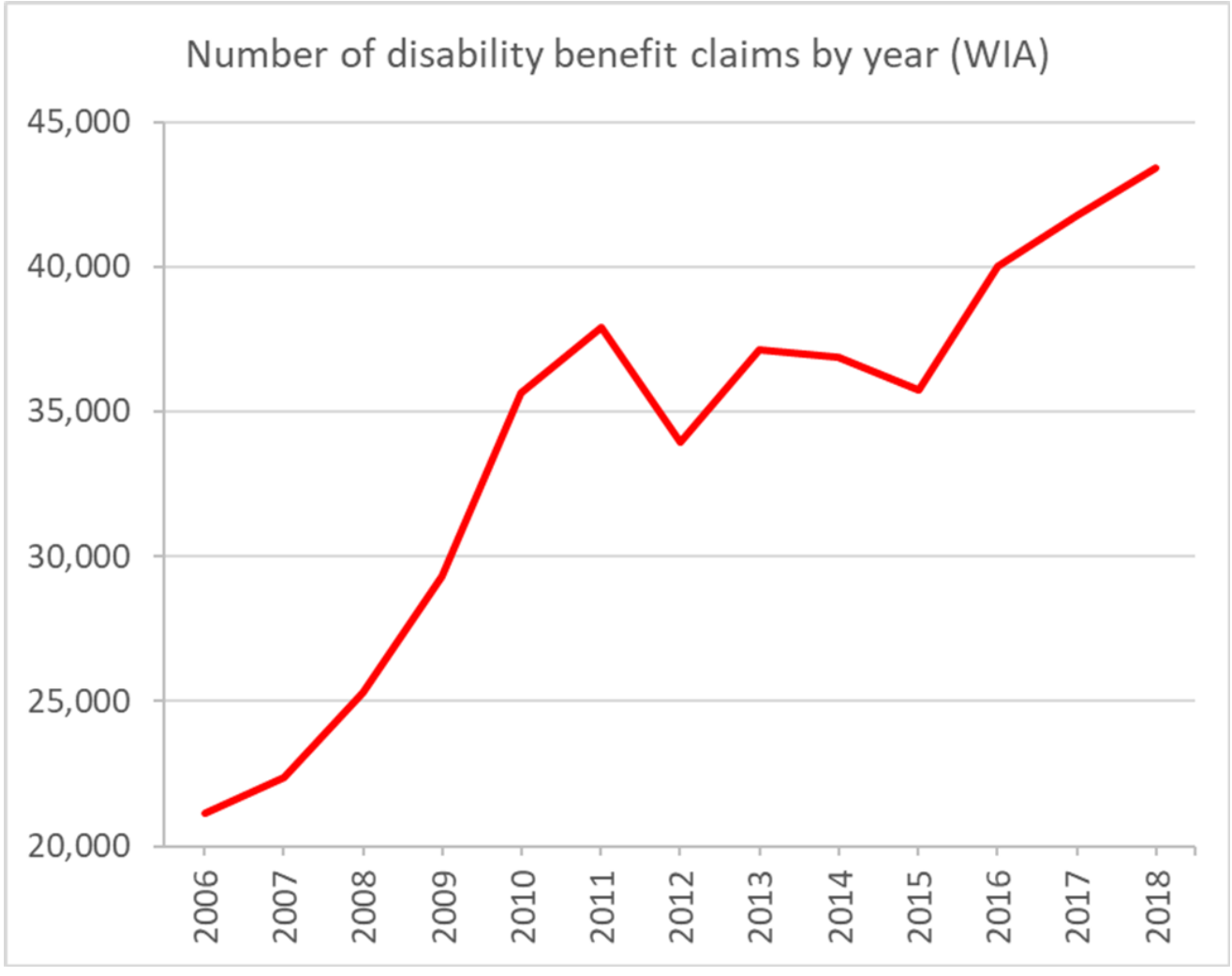
Motivation

- A higher legal retirement age implies higher labor participation among older people, a longer period of tax and social security contributions, and a shorter period of pension claims.
- But the extent of the gains for public finances and the effect on well-being of older workers remains unclear:
  - Those working in physically demanding occupations struggle to work longer (Vermeer et al., 2016; Kok et al., 2018).
  - Among men close to AOW age, the fraction wanting to work fewer hours increased by more than 10 pp since the AOW age was increased, with no notable change among younger age groups (Been et al., 2019).
  - A higher statutory retirement age leads to more disability benefit claims.

Motivation


Fraction of men wanting to work fewer hours
0.25
0.20
0.15
0.10
0.05
0.00
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
35-45
45-55
55-65
65-75

Motivation


Number of disability benefit claims by year (WIA)
45,000
40,000
35,000
30,000
25,000
20,000
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018

Motivation

- Dillingh et al. (2018) predict that, if the health status of people improves as expected, the probability of disability benefit use among the future 65-69 age group will become closer to that among the current 60-64 age group.
- Alblas and Koot (2014) predict that from 2019 to 2040, disability benefit use will grow from 315,800 to 503,700, and benefit costs will increase from 5 to 8 billion euros based on long-term projections of benefit use and costs, accounting for the changes in the size and composition of the labor market and a higher AOW age.
- Ongoing and planned research by the Department of Financial and Economic Affairs (FEZ) at the MvSZW aim at updating the earlier results on the effect of a rising retirement age on disability benefit use.

Motivation

- Among older workers, we first analyze the effect of higher AOW age on the probability of retirement, employment, disability benefit claiming, and unemployment benefit claiming.
- We then focus on sick workers, and analyze the effect of higher AOW age on how they are able to cope with their health impairment and still utilize their remaining work capacity instead of claiming disability benefits.

Motivation

- Among older workers, we show that higher AOW age is increasing disability benefit claims.
- Among sick workers, we show that higher AOW age is reducing how much sick workers utilize their remaining work capacity. That is, compared to younger sick workers, older sick workers
  - are much less likely to resume working,
  - are much more likely to depend on disability benefits,
  - are much more likely to depend on unemployment benefits,

Analysis I · Topic

- What is the effect of a higher AOW age on the probability of retirement, employment, disability benefit claiming, unemployment benefit claiming?

Analysis I · Data

- LISS panel, using 10 annual waves from 2008 to 2017, including people 55 to 75 years old.

Analysis I · Method

- We use discrete choice regression analysis to study the effect of increasing the AOW age by one year on the probability retirement, work, claiming disability and unemployment benefits.

Analysis I · Results

Effect of a one year increase in AOW age

	Retirement	Employment	DB claiming	UB claiming
Effect of higher AOW age	-0.070^{***}	0.056^{***}	0.022^{**}	-0.008
	(0.018)	(0.020)	(0.010)	(0.009)
Observations	14,643			
Individuals	3,347			

***, ** indicate statistical significance at the 1, 5 percent levels.

Analysis II · Topic

- The disability reform in 2006 (WIA reform) aimed at increasing labor participation and decreasing disability benefit claims. How did older sick workers respond to the reform compared to the younger sick workers?

Analysis II · Data

- UWV data
  - Monthly records of workers who fell sick from July 2003 to March 2004.
  - Data on the beginning and ending dates of sickness, sector of employment, gender, date of birth, and country of birth.
- Data is linked to CBS data on wages, disability benefits, and unemployment benefits available from January 1999 to July 2015.

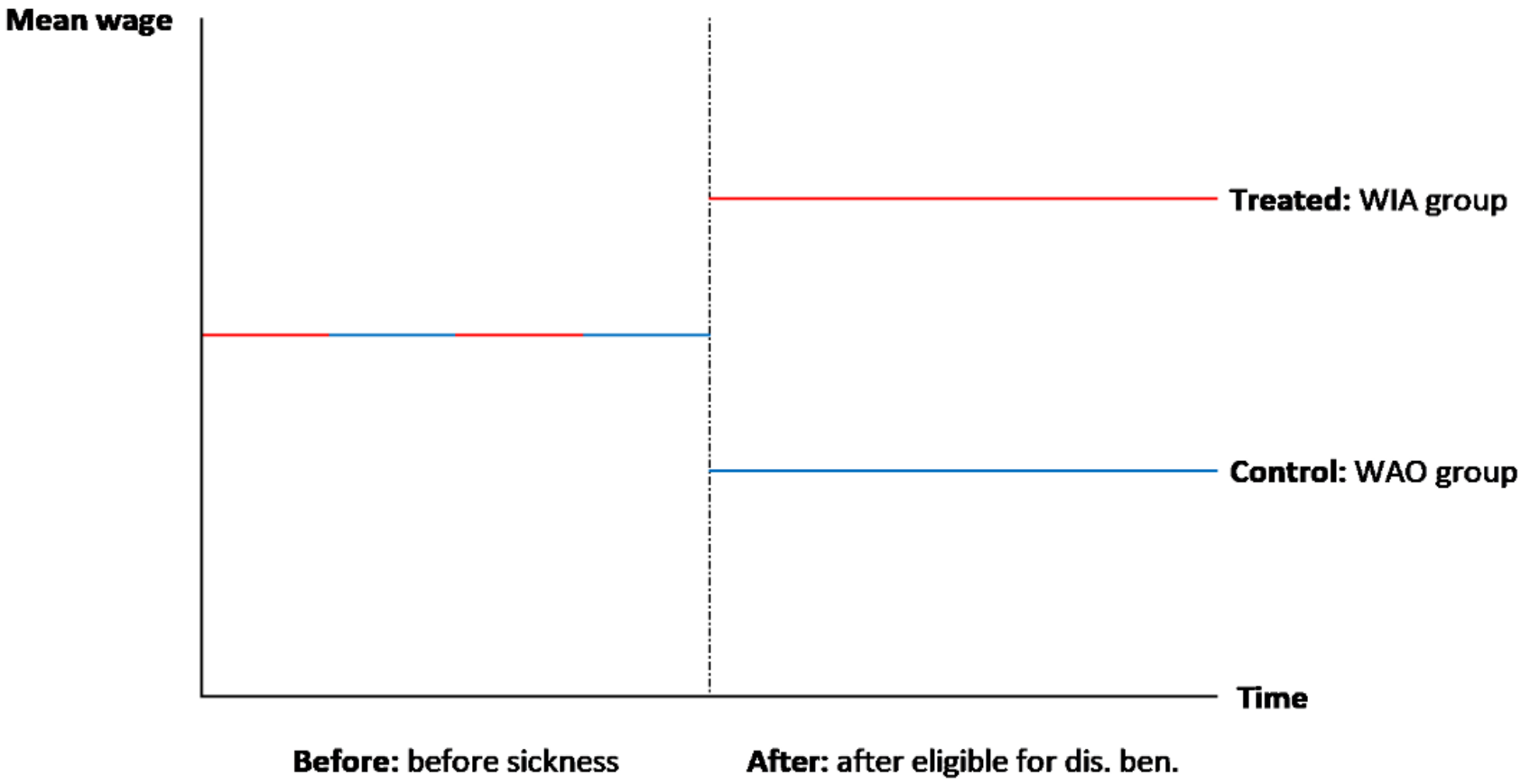
Analysis II · Method

- Eligibility for different disability schemes:

WAO	WAO	WAO	Trans. WAO	Trans. WAO	Trans. WAO	WIA	WIA	WIA
07.2003	08.2003	09.2003	10.2003	11.2003	12.2003	01.2004	02.2004	03.2004

- WIA: stricter eligibility criteria, and financial incentives for work resumption.

Analysis II · Method



Analysis II · Results

Effects of the disability reform on labor participation and benefit receipt by age grpups

	Between ages 40 and 44	Between ages 50 and 54	Above age 59
Effect of the reform on DB receipt (pos. UB)	−0.067***	−0.091***	−0.031***
	(0.008)	(0.010)	(0.009)
Effect of the reform on labor participation	0.021**	0.043***	0.004
	(0.009)	(0.010)	(0.021)
Effect of the reform on UB receipt (no DB)	0.013***	0.029***	0.033**
	(0.003)	(0.004)	(0.014)
Observations	2,084,652	1,782,324	389,448
Individuals	11,087	9,481	2,076

***, **, * indicate statistical significance at the 1, 5, 10 percent levels.

Analysis II · Results

Effects of the disability reform on labor and benefit income by age groups

	Between ages 40 and 44	Between ages 50 and 54	Above age 59
Effect of the reform on DB per mon. (pos. UB)	−48.792***	−103.513***	−22.614*
	(12.263)	(16.631)	(12.749)
Effect of the reform on wage per month	83.539**	157.964***	−31.836
	(32.711)	(37.188)	(78.772)
Effect of the reform on UB per mon. (no DB)	22.582***	41.984***	69.712***
	(4.822)	(6.730)	(23.916)
Observations	2,084,652	1,782,324	389,448
Individuals	11,087	9,481	2,076

***, **, * indicate statistical significance at the 1, 5, 10 percent levels.

Analysis III · Topic

- WIA introduced financial incentives for work resumption. How do these incentives affect older disabled workers compared to younger disabled workers?

Analysis III · Data

- UWV data
  - Monthly records of workers who entered the DI scheme from January 2006 until June 2012.
  - Data on age, gender, marital status, sector, pre-sickness wage, wage during disability (if applicable), grade of disability, disease type, earnings capacity, among a number of other benefit related characteristics.

Analysis III · Method

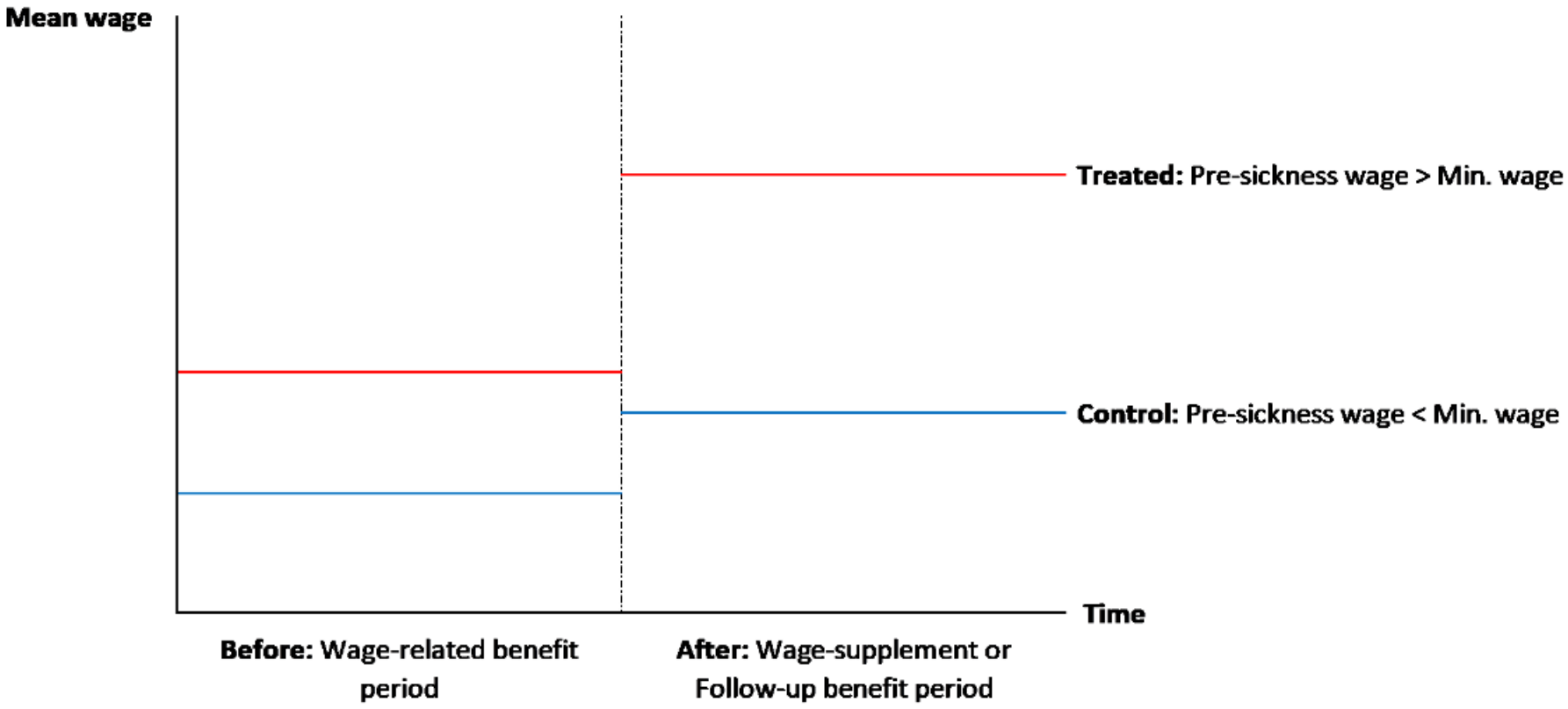
Sickness ben.	LGU	LAU	
1.0 x PW	0.7 x (PW - PW x (1 - D) x U)	0.7 x D x PW	if working more than 50% of remaining work capacity
24 months	3 to 38 months	Until 65	

VVU	
0.7 x D x $\overline{PW}$	if working less than 50% of remaining work capacity
Until 65	

Analysis III · Method

- Financial incentives to work at the end of the LGU period:
  - $VVU - LAU = -0.7 \times \left(PW - \overline{PW}\right) \times D$
  - $LAU - LGU = -0.7 \times \left(PW \times (1 - D) \times (1 - U)\right)$
  - $VVU - LGU = -0.7 \times \left(PW \times (1 - (1 - D) \times U) - \overline{PW} \times D\right)$
- The incentives are larger for people with higher pre-sickness wages.

Analysis III · Method



Analysis III · Results

Effect of the financial incentives for work resumption on labor participation and daily wage earned while disabled

	Between 30 and 39	Between 40 and 49	Between 50 and 59	Above 59
Effect of fin. incentives on labor par.	0.060**	0.111***	0.005	0.032
	(0.029)	(0.037)	(0.037)	(0.055)
Effect of fin. incentives on daily wage	8.826***	7.687***	3.423***	0.817
	(1.677)	(1.457)	(1.038)	(1.691)
Observations	38,054	88,771	140,952	52,374
Individuals	1,082	2,318	3,586	1,6462

***, **, * indicate statistical significance at the 1, 5, 10 percent levels.

Summary of findings

- Among older workers, a higher retirement age leads to more labor participation but also more disability benefit claims.
- Among sick workers, working at increasingly older ages reduces how much sick workers utilise their remaining work capacity.

Policy implications

- If the retirement age is raised further, disability benefit claims will increase further.
- This is not only because the size of the population of older workers is larger, but also because at increasingly older ages disabled workers struggle more to utilize their remaining work capacity.
- Given the clear age effect we find, improvements in life expectancy is not likely to help how much older workers will utilize their remaining work capacity if the retirement is tied to life expectancy.
- Increasing disability benefit use is not likely be due to moral hazard.

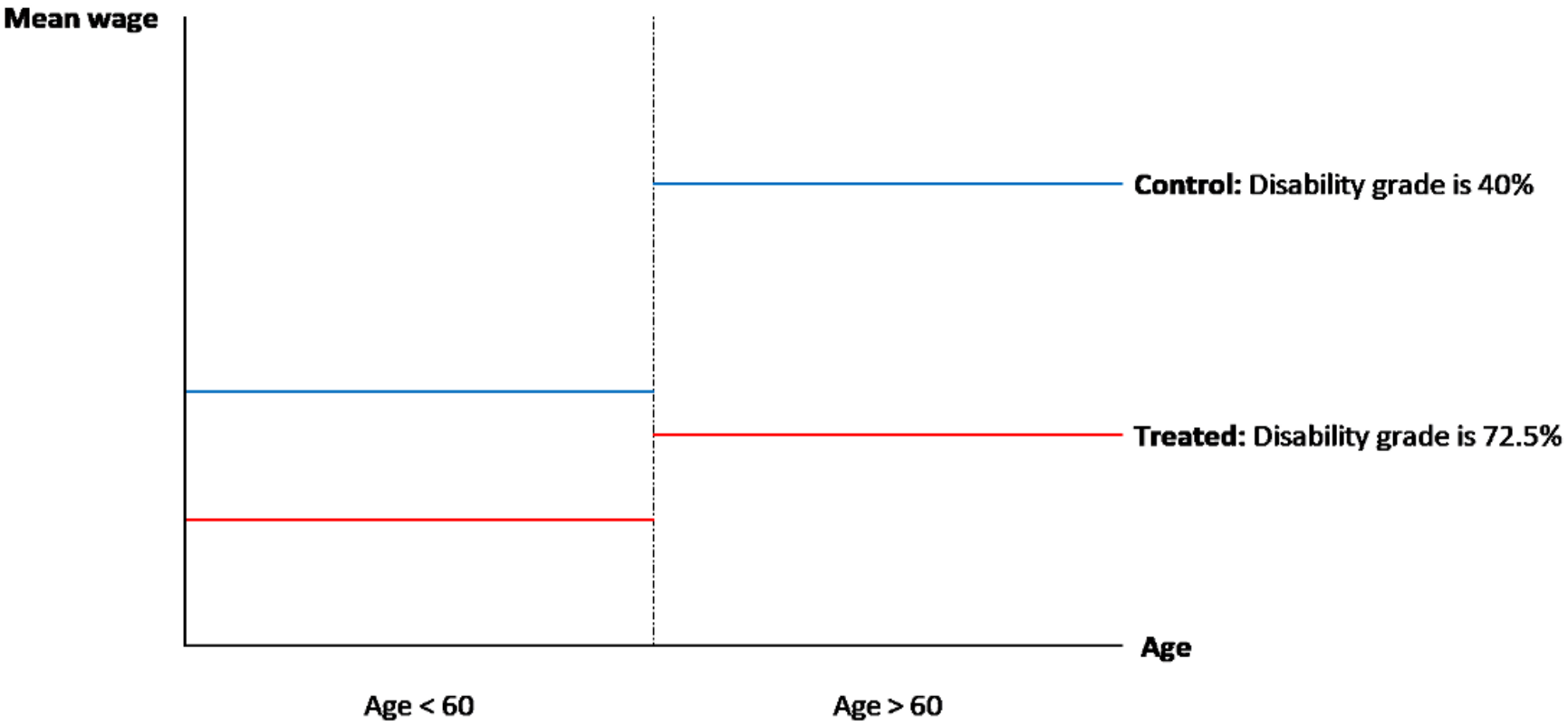
Additional analysis · Topic

- If the disability grade is higher, do older workers loose wages more than younger workers do?

Additional analysis · Data

- UWV data on disabled workers: same as in the last analysis.

Additional analysis · Method



Additional analysis · Results

Effect of a higher disability grade on daily wage while disabled

	$\leq$ 39	45-49	55-59
Effect for workers with 50% disability	-1.117^{***}	-6.854^{*}	-1.683
	(3.710)	(3.676)	(3.094)
Effect for workers with 60% disability	-6.051^{***}	-5.318	-0.343
	(4.001)	(3.963)	(3.408)
Effect for workers with 72.5% disability	-12.189^{***}	-10.023^{**}	-8.497^{**}
	(4.073)	(4.055)	(3.427)
Observations	93,625	94,888	121,253
Individuals	2,879	3,340	3,145

Comparison group: workers with 40% disability who are 60 years old. ***, **, * indicate statistical significance at the 1, 5, 10 percent levels.