

# Can the old indeed work longer?

*The labour market, educational and inequality effects of the increases in the retirement age in the Netherlands*

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Graduating August 2018

Presentation for Netspar Student & Executive Pension Day - 25 June 2018



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1

# Introduction



# Research question

*"How did the old respond to the higher retirement age?"*



# Hypotheses

1

The retirement age should have been raised sooner to limit negative effects on labour market, educational and inequality outcomes.

2a

The increase of retirement age caused relatively more unemployment for workers over 55.

2b

The level of education of workers over 55 has not grown due to the increase in retirement age.

2c

Inequality as measured by relative income of low-educated individuals over relative income of high-educated individuals has increased after the increase in the retirement age.

2d

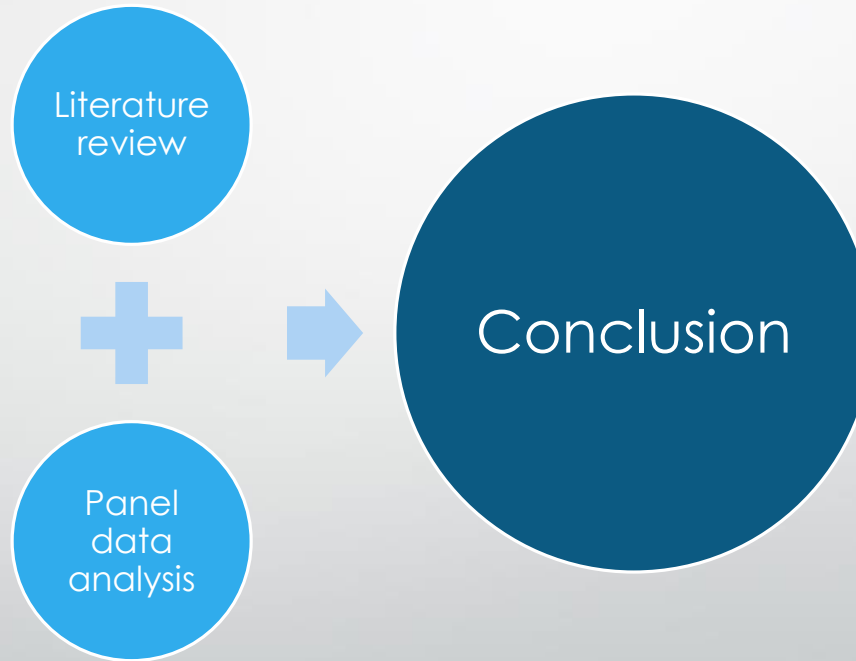
High income individuals have been less responsive to the change in the mandatory retirement age than low income individuals.



1

Introduction

# Setup

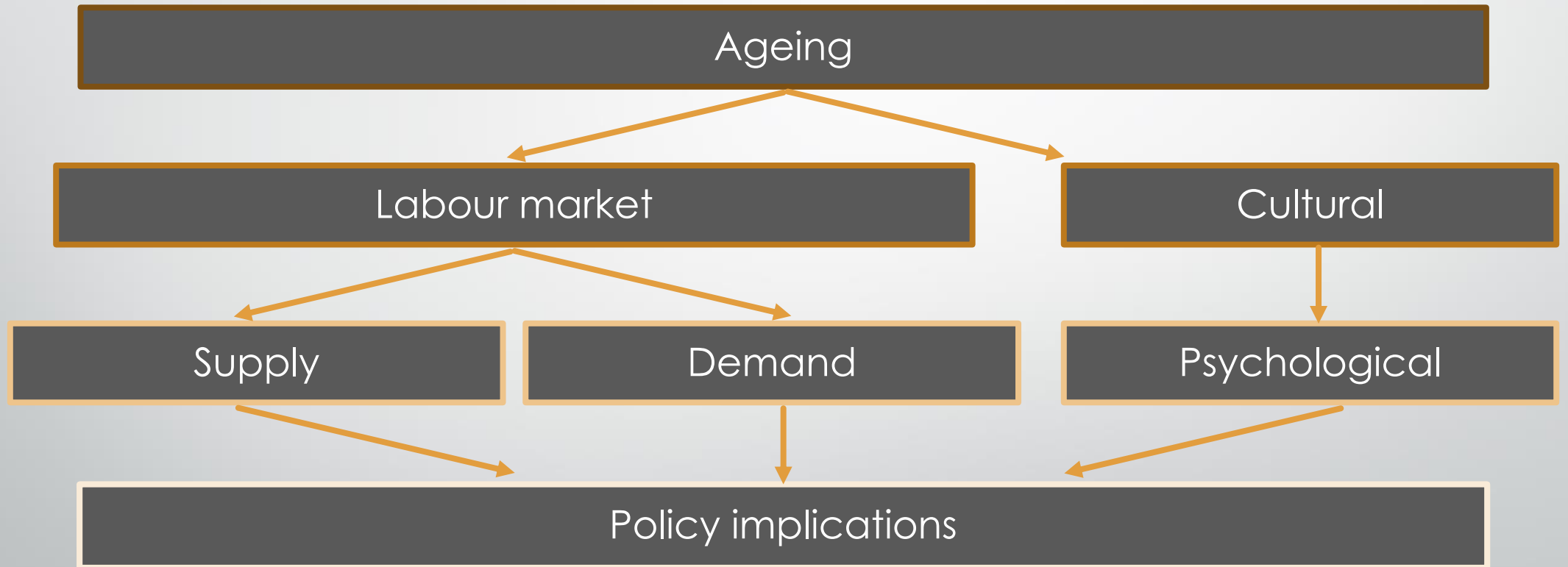


2

# Literature Review



# Setup



## Economic

A higher (old-age) dependency ratio results in higher contributions if no adjustment to life expectancy is made.

## Social

The median voter becomes older, which results in changing preferences of governments.

Sources: Barr (2002), Tepe and Vanhuyse (2010)



# 2

## Literature Review



# Older workers tend to

- Work less
- Be less motivated to work
- Be less satisfied with their job
- Can be influenced less by financial incentives
- Already be stimulated to work substantially

Sources: Hurley (2012), Van Erp, Vermeer and Van Vuuren (2014), Van Vliet (2013), Van Rooij, Vermeer and Van Vuuren (2013), Euwals, Mooij and Van Vuuren (2014),



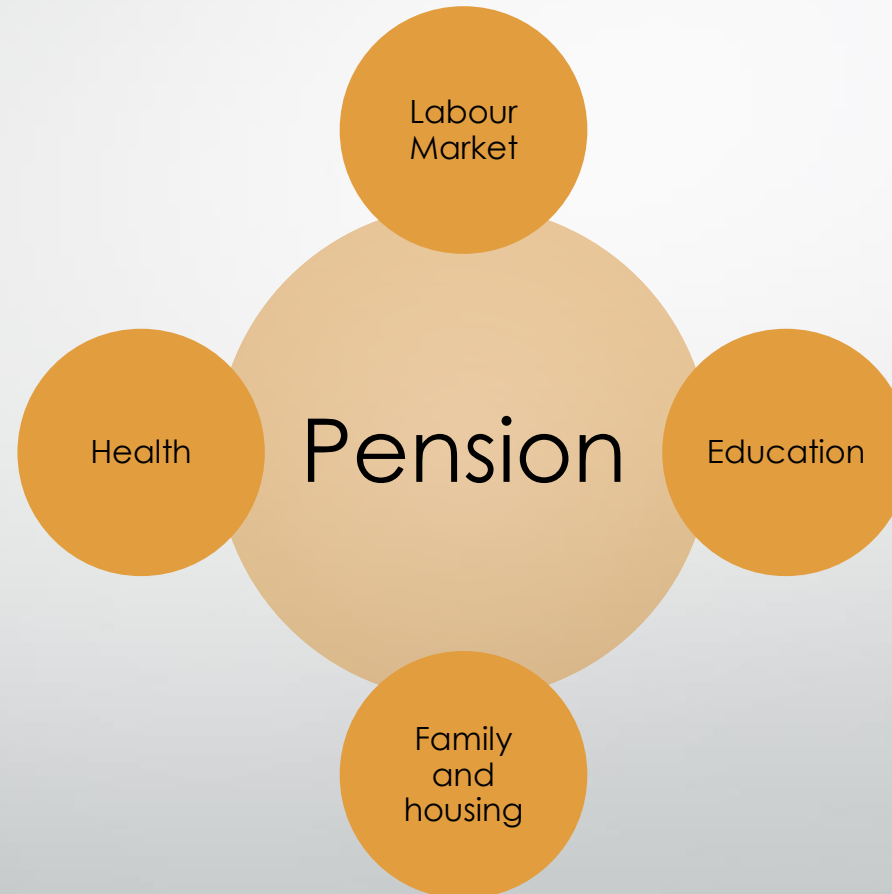
# Employers of older workers tend to

- Take a negative stance towards older workers (in the Netherlands)
- Support the social standard of retirement as an easy way out
- Think older workers are less productive or too expensive
- And to some extent they are right
- But older workers have recently increased their investment in human capital

Sources: Van Dalen, Henkens and Schippers (2009), Vermeer, Van Vuuren and Van Rooij (2014), Burtless (2013), Johnson (1993), Borghans, Fouarge, De Grip and Van Thor (2011)



# The young vs old frame is wrong



Sources: Kalshoven and Zonderland (2015), Boix (2010), OECD (2017), Walker and Zhu (2003), Boshara and Noeth (2015)



Some steps have been taking, but are they the right ones at the right time?

## Reforms

Abolishment  
early  
retirement

Increasing mandatory  
retirement age

Part-time  
retirement

## Responses

Adjustment?

Dissapointment

Inequality?



# Overview

	Actual retirement	Employment of near-retired
Mandatory retirement	+	?
Old	-	-
Low-income	+	-
Education and training	+	-
Low job satisfaction	-	-
Getting used to it	?	?



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# Methodology

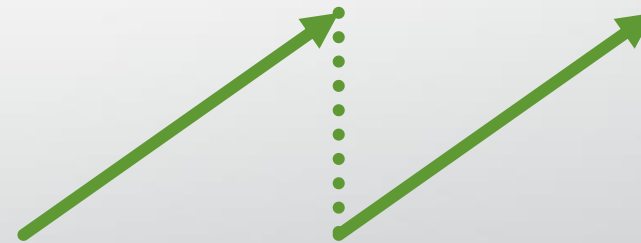


## Two types of analysis

Difference-in-differences



Regression Discontinuity



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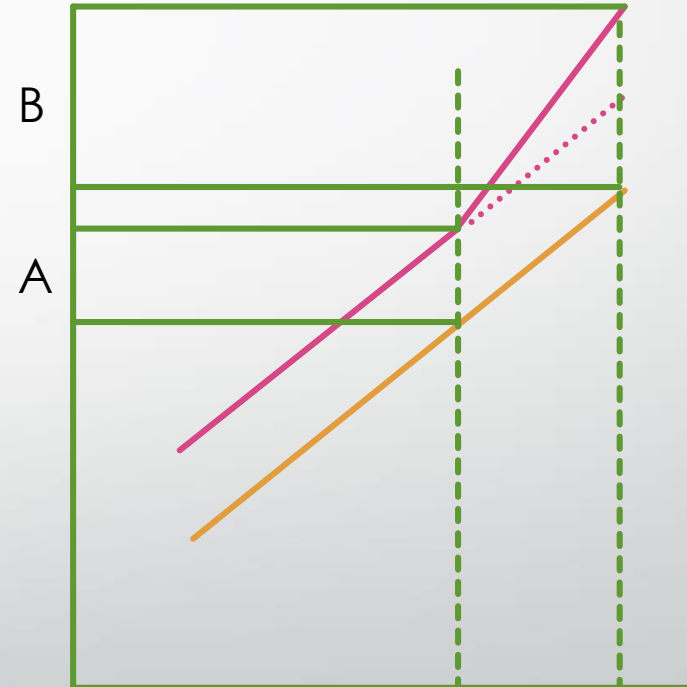
Methodology

# Explanation

Difference-in-differences



$$\text{DiD} = B - A$$



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Methodology

Difference-in-differences

# Variables

Employment

Education and training

(Part-time) retirement

Income



Constant

+ Affected by higher retirement age

+ group fixed effects

+ time fixed effects

+ group specific linear time trends

Treatment dummy (1 if yes)

Such as income/education  
+ error

Such as the 2008 credit crisis

Such as labour participation



# Variables

$$EDU_{i,t} = \alpha + \beta RA_{i,t} + \gamma_i + \delta_t + \theta_{i,t} + \epsilon_{i,t}$$

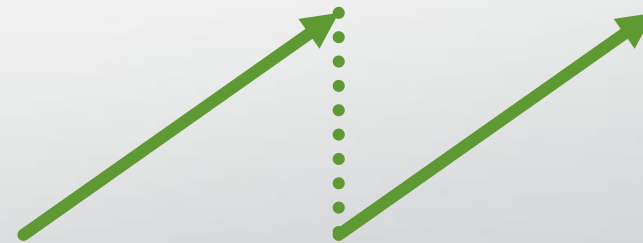


## Two types of analysis

Difference-in-differences



Regression Discontinuity



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Methodology

# Explanation

Fuzzy  
Regression Discontinuity



- Are the groups just before and just after the treatment (higher retirement age) different?
- Fuzzy, because changes happen stepwise



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Methodology

Regression Discontinuity

# Variables

Employment

Education and training

(Part-time) retirement

Income



Constant

+ Age

+ Mandatory retirement age

+ Actual retirement age

+ Controls

Running variable

Instrument

+ error

Dependant variable

Such as income/education



# Variables

$$EDU_{i,t} = \alpha + \beta R_i + \gamma RA_{a,i,t} + \delta INC_{i,t} + \epsilon_{i,t}$$



# Discussion



# Hypotheses

1	The retirement age should have been raised sooner to limit negative effects on labour market, educational and inequality outcomes.
2a	The increase of retirement age caused relatively more unemployment for workers over 55.
2b	The level of education of workers over 55 has not grown due to the increase in retirement age.
2c	Inequality as measured by relative income of low-educated individuals over relative income of high-educated individuals has increased after the increase in the retirement age.
2d	High income individuals have been less responsive to the change in the mandatory retirement age than low income individuals.



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# Discussion

With Teun Loermans

