

# Employment and Mortality of Older Canadians: Implications for Pensions

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# How sustainable are pensions in Canada?

- Depends on earnings growth, savings rates, lifespans, and how lifespans are split between work/retirement.
- Relative to other countries public pensions are in decent shape:
  - Canada Pension Plan starts drawing on CPPIB ~2023, but sustainable to 2090.
  - OAS system will grow from 2.38% to 2.77% of GDP from [2015-2032]
- Contrast to:
  - German population growth: We are past ‘peak Germany’.
  - Italy: public pensions as share of GDP is 14%.
- Challenges remain:
  - Retirement incomes of mid-earners without employer-sponsored pension.
  - Thinking more carefully about lifespans and work/retirement splits.

# Plan for this presentation

Focus on lifespans and employment.

Three sets of facts, all underappreciated...

1. Employment rates for older workers.

(Trend is up.)

2. Life expectancy at older ages.

(Trend is up, dramatically)

3. Are we fully employing elder work capacity?

## Credit where it is due: joint work with



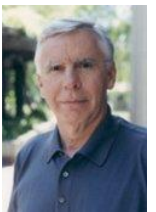
Michael Baker, University of Toronto



Courtney Coile, Wellesley College



Tammy Schirle, Wilfrid Laurier University



David Wise, Harvard University

Papers can be found on my website at <http://faculty.arts.ubc.ca/kmilligan>

# Plan for this presentation

**1. Employment rates for older workers.**

2. Life expectancy at older ages.

3. Are we fully employing elder work capacity?

# How much are seniors working?

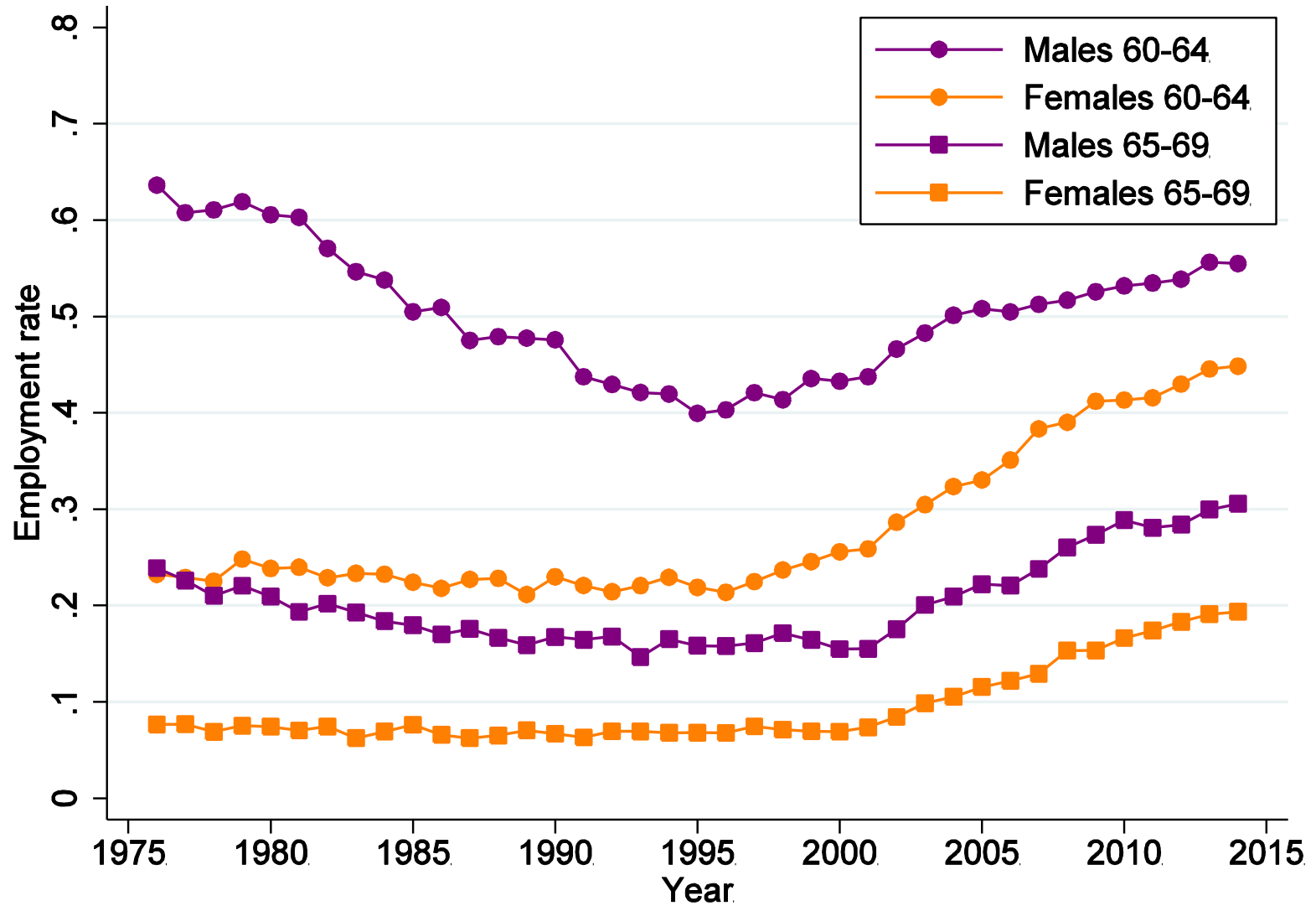
Lots of ways to measure an average 'retirement age'

- How account for job-switching, part-time employment?
- See Denton and Spencer 2009

Instead, let's just look at the employment rate in the Labour Force Survey.

- Take labour force status question, count proportion answering 'employed'.
- Monthly data from 1976 to 2014 on comparable basis.

# Employment rates from Labour Force Survey, 1976-2014



# Why are older Canadians working more?

- ‘New’ older cohorts of women have very different career paths.
- Married males prefer to retire with spouse: leads to later, joint retirement (Schirle 2008)
- Speculative possibilities: is employment growth a response to
  - Lower earnings growth?
  - Lower return on savings?
  - Longer lifespans?



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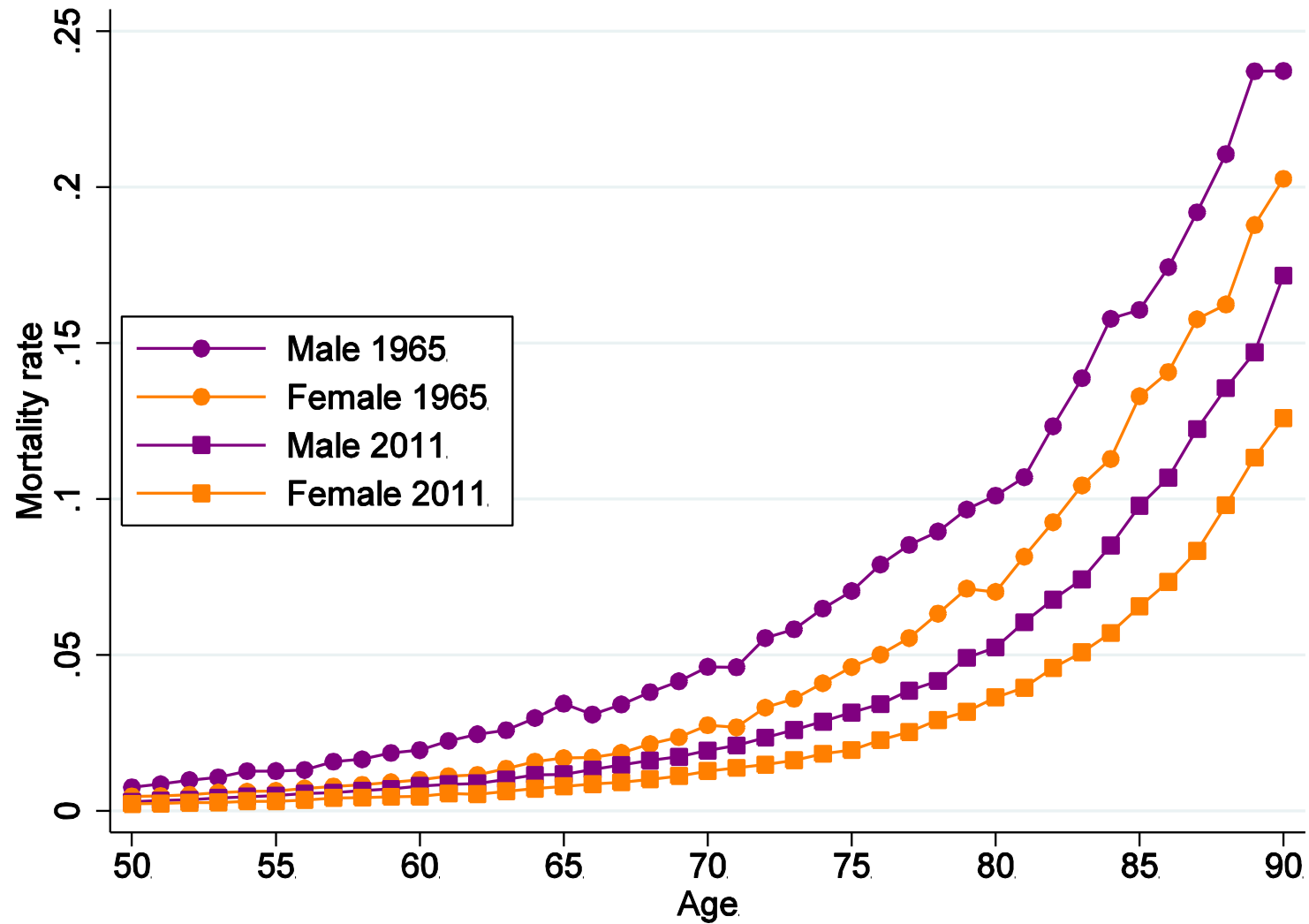
# Mortality and life expectancy at older ages

Make use of two measures:

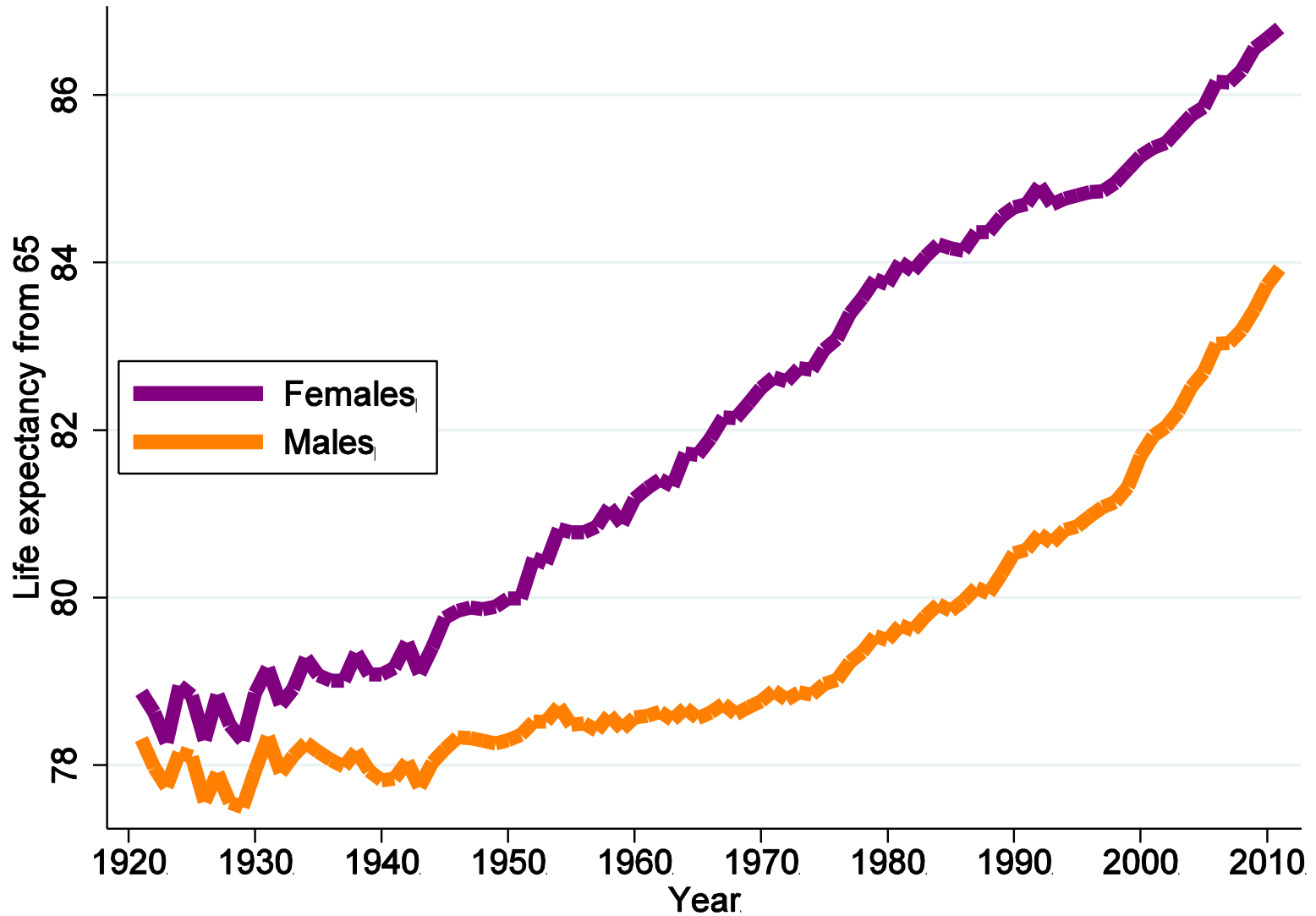
- Death rate: roughly, count of those who died divided by population size for a given sex/age.
- Life expectancy:
  - Take the cross-sectional age pattern of death rates in a year.
  - Assuming alive to a certain age, figure out how long until only 50 percent chance of survival.
  - Note: this is a cross-sectional, not cohort-based estimate.

Data source: Human Mortality Database: [www.mortality.org](http://www.mortality.org)

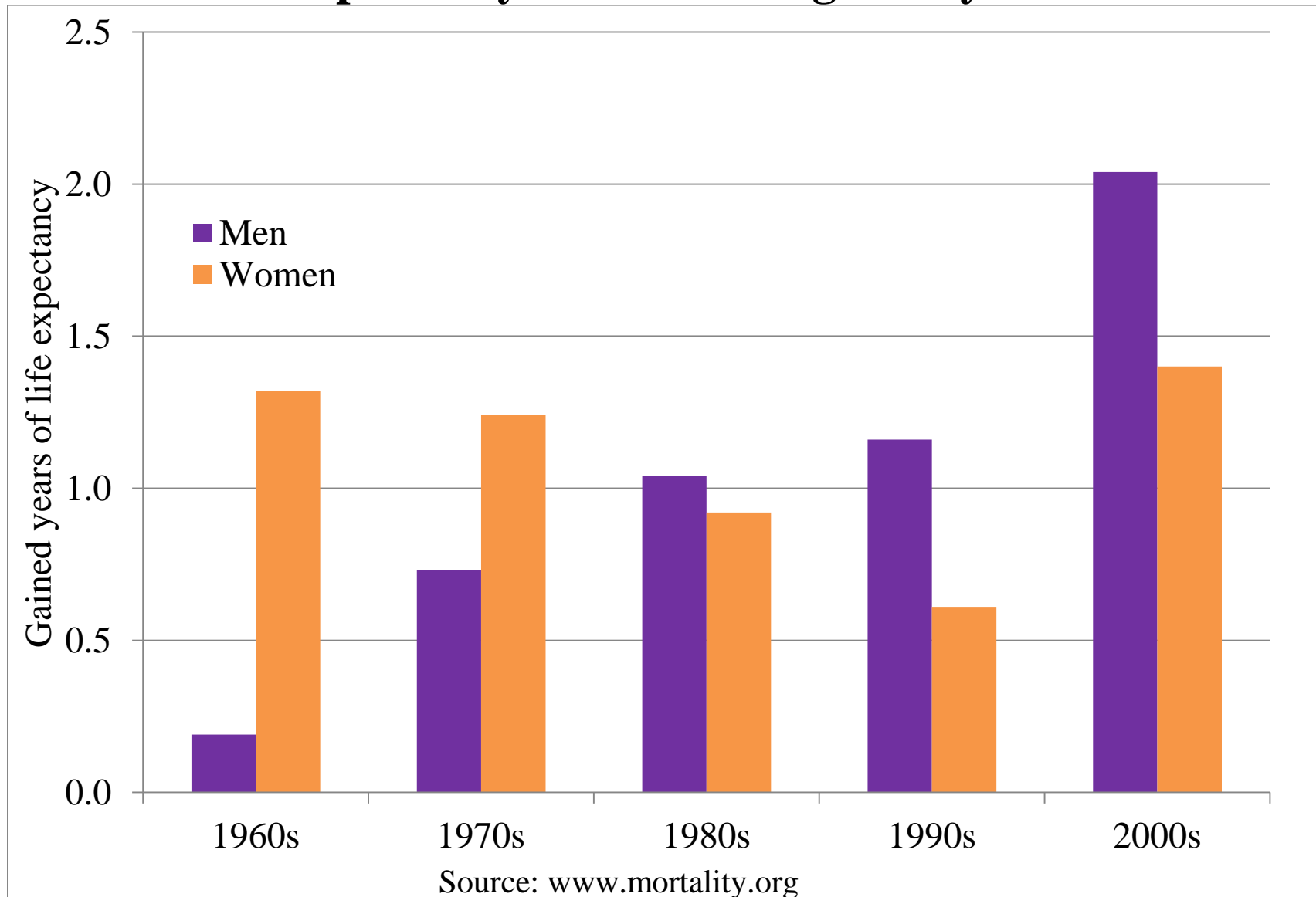
## Death rates: comparing 1965 to 2011



## Life Expectancy from age 65: 1921 to 2011



## Life Expectancy Gains from age 65 by Decade



## Life Expectancy Gains: Comments

- Since 1965, life expectancy grew by 5 years; OAS eligibility went from 70 to 65
  - We're funding **ten** more years of OAS than in 1965.
- Is extra lifespan spent in ill health? The 'healthy life expectancy' debate.
- Trend appears to be continuing right up to 2011; no slowdown.
  - Driving the trends until now: smoking cessation; heart health
  - Future trends: Obesity vs. medical technology improvements.
- How is this spread across SES? Evidence of SES gradients, but room for more work here... (Wolfson et al. 1993; Mustard et al. 2013)

# Plan for this presentation

1. Employment rates for older workers.

2. Life expectancy at older ages.

**3. Are we fully employing elder work capacity?**

# How much of older work capacity is employed?

Many health-based approaches to study work capacity. (See Cutler, Meara and Richards-Shubik 2011)

- Here: I use mortality as an indicator of health to gauge work capacity.

Disadvantages:

- Very coarse measure of health.
- Takes extreme view on 'health lifespan' debate.

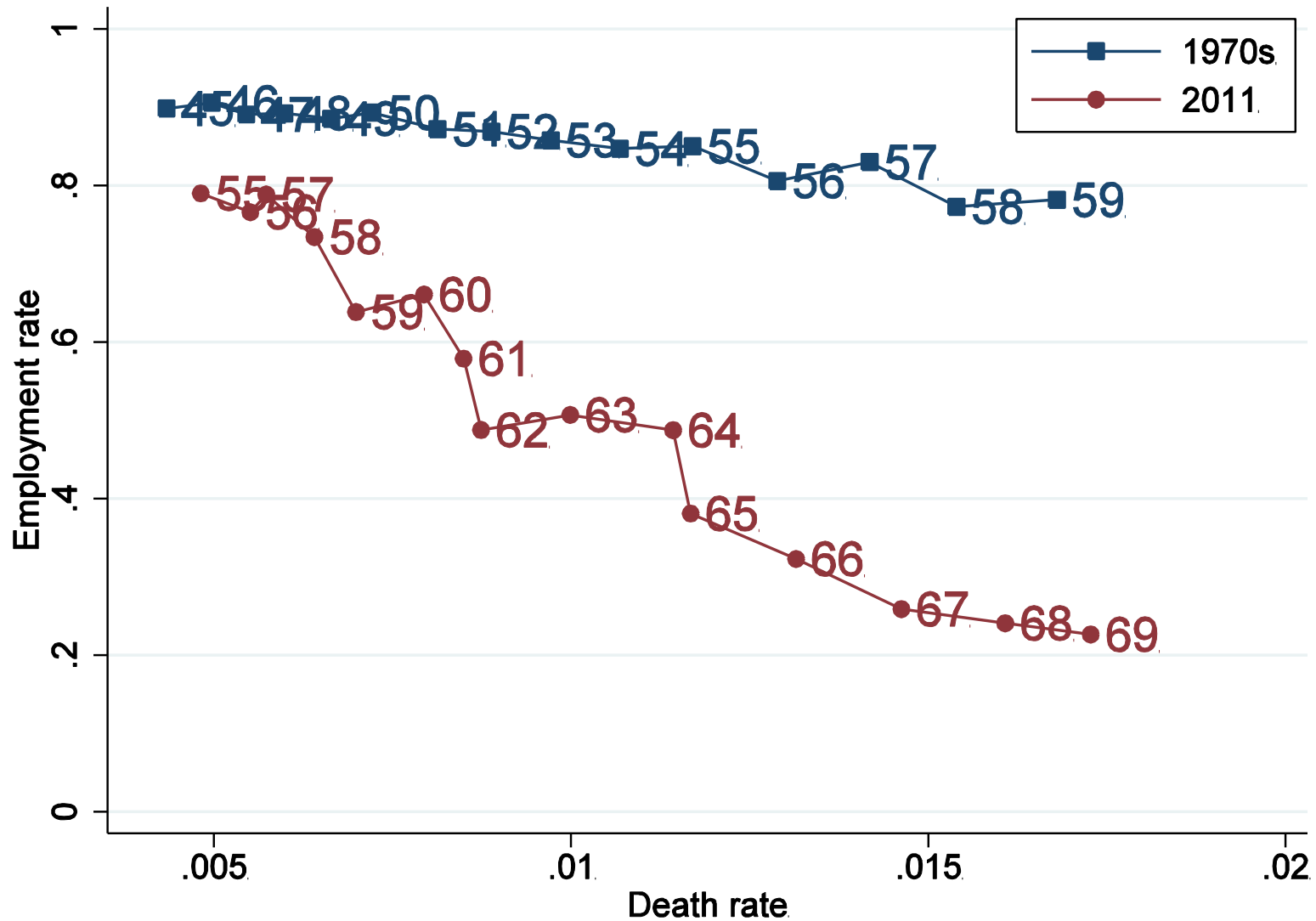
Advantages:

- Easy to measure; centuries of data available.
- Internationally comparable; not subjective.

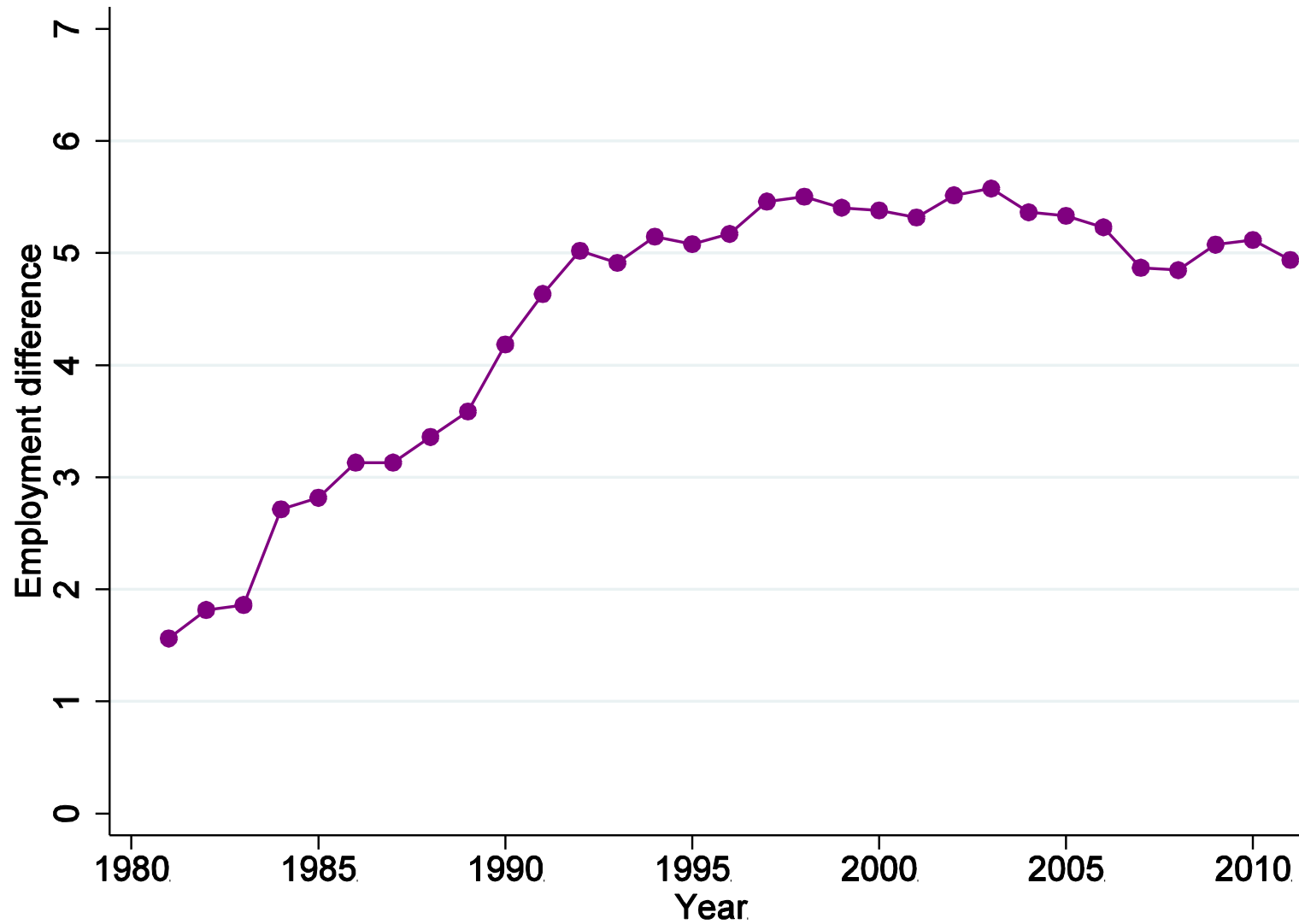
See Milligan and Wise (*J. Population Aging*)



# Employment vs. Mortality at Older Ages: Men 1970s and 2011



## Mortality-work capacity vs. 1970s, Men



## Comments on work capacity

- Through 1970s and 1980s, mortality was improving and men were working less at older ages.
  - Combined to give large rise to unused work capacity.
- Since 1995, employment increases have offset further mortality improvements
  - No further deterioration in unused work capacity.

# Conclusions

## Summary of results:

1. Older Canadians age 60+ have been working more.
2. Lifespans have been expanding rapidly
3. Since 1995, work has increased along with health capacity.

## Policy conclusions:

- Need more reflection on implications of rapid mortality improvements.
  - All pension policy should be discussed in context of longer lifespans.
- Continue to reflect on removing barriers to work at older ages:
  - Tax policy, pension policy, social attitudes, business practices.

## References

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