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Should we mind the gap?

**Socioeconomic inequalities in health and life expectancy
around retirement age in 10 Western-European countries**

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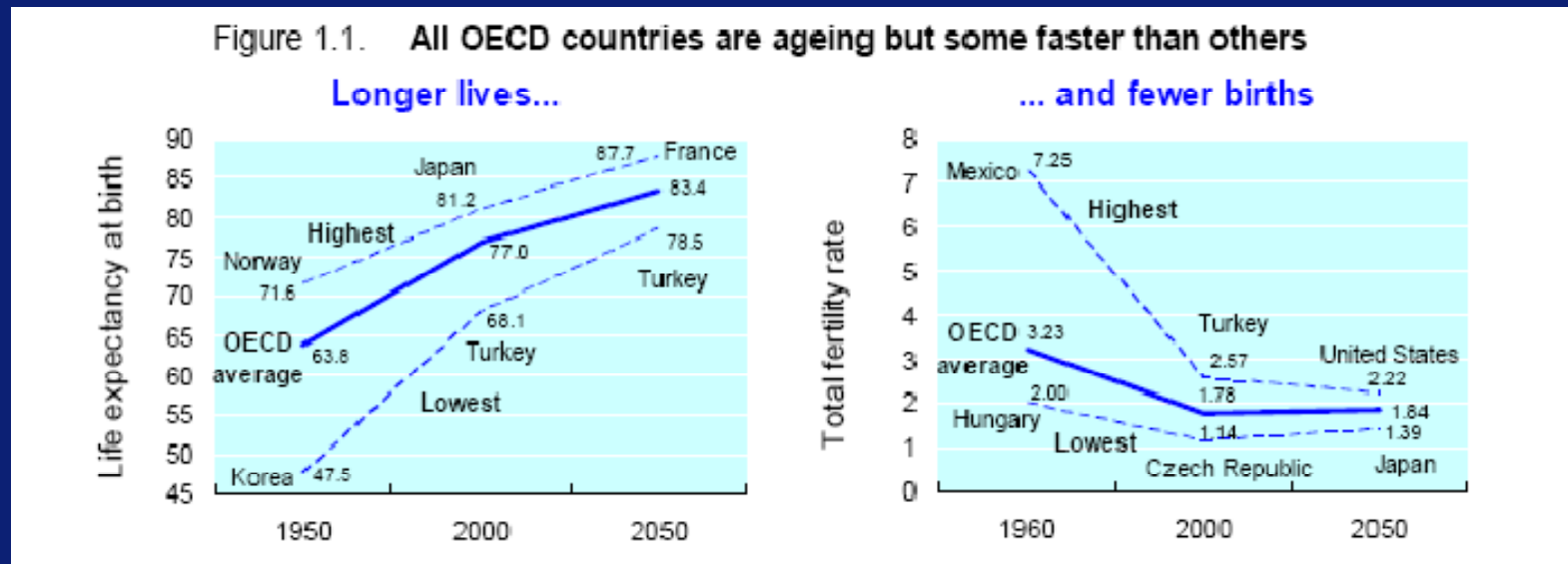
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Background

- Western-Europe: low birth rates, increasing life expectancy and dependency ratio, population ageing → rising spending on pension



Source: OECD

Background 2

- To sustain the pension systems, countries implement reforms
- An important element of the systematic reforms: increasing retirement age
- In most of the OECD countries retirement age is at 65 for both men and women

Background 3

- However it is possible that ...
 - Increasing LE \neq being able to work longer
 - The increase in LE \neq increase in healthy LE
- LE and healthy LE is strongly related to socio-economic status (SES)
- It is important to know how long people by SES remain healthy to be able to work

Study question

- How large is the magnitude of socio-economic differences in total and healthy life years at old age in Europe?
- Partial disability-free life expectancy between age 50 and 65
(\approx healthy years before retirement)
- Disability-free life expectancy after age 65
(\approx healthy years after retirement)
- Life expectancy after age 65
(length of life after retirement)

Data

- European Community Household Panel
 - Annual longitudinal survey
 - 1994 – 2001
 - Designed and coordinated by Eurostat
 - Covers demographics, labor force behaviour, income, health, education, etc.
- For our study
 - 1995 – 2001
 - Age: 50+
 - 10 Western-European countries

Data 2

- Disability question:

“Are you hampered in your daily activities by any physical or mental health problem, illness or disability?”

- *Yes, severely*
- *Yes, to some extent*
- *No*

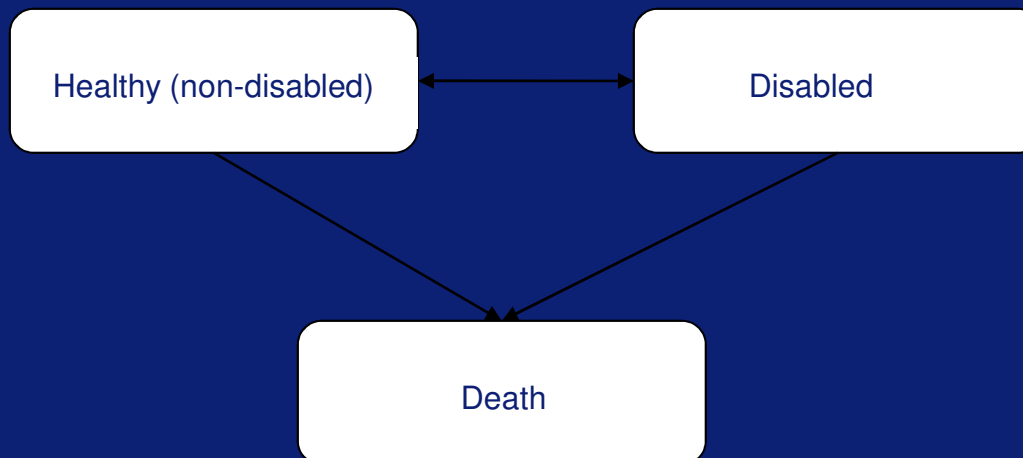
- Socio-economic indicator:

Highest completed level of education (Standard Class. Of Education)

- *Lower secondary education or lower*
- *Upper secondary education*
- *Tertiary education (vocational / university)*

Methods

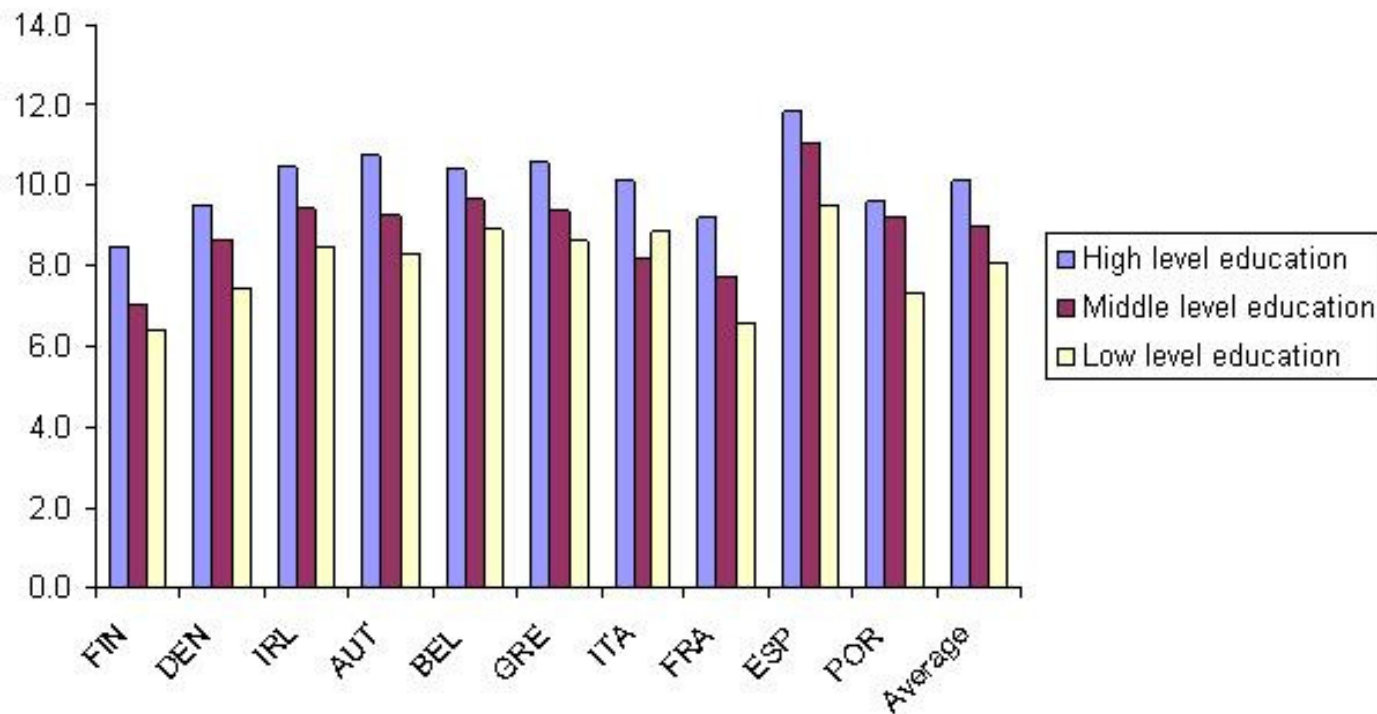
- 3-state model



- Calculating transition rates by multi-state Markov modelling
 - Incidence, recovery
 - State-specific mortality
- Controlling for age, sex, education level, country
- Rescaling mortality rates
- Multi-state life table

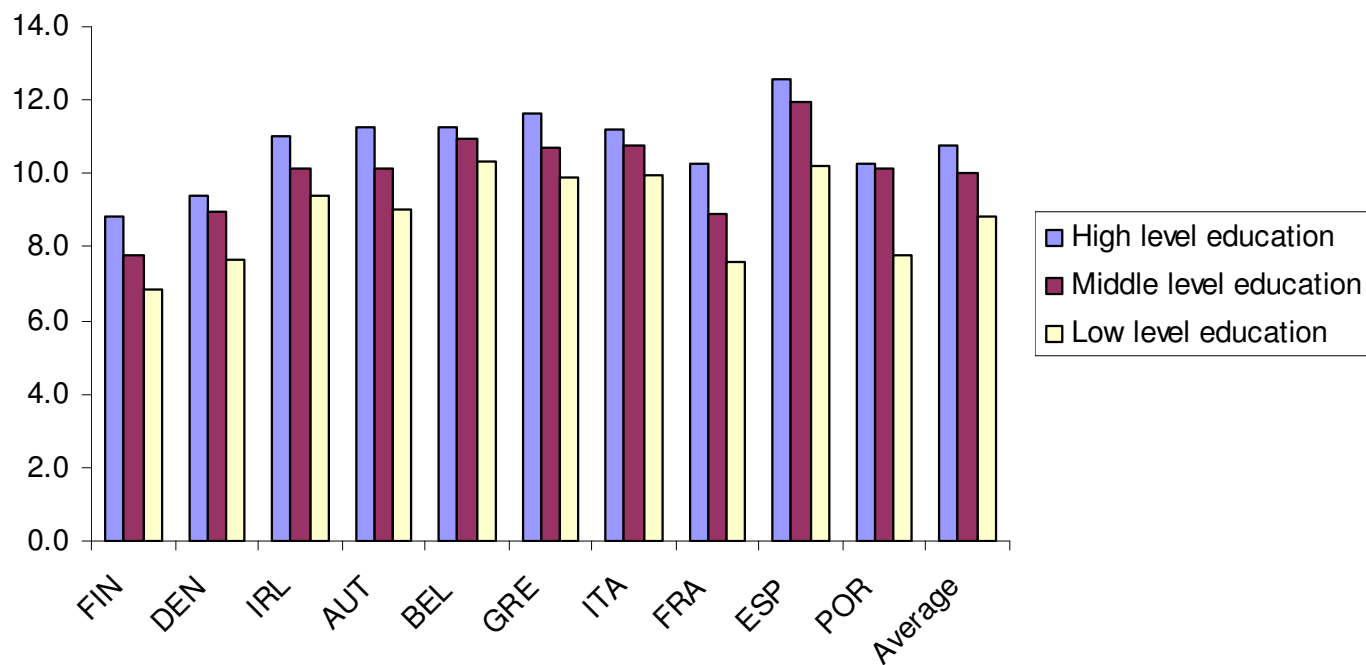
Results 1

Partial DFLE between age 50 and 65 by educational level, men



Results 2

Partial DFLE between age 50 and 65 by educational level,
 women



Results 3

Total life expectancy	MEN			
	High	Middle	Low	High-Low / Middle-Low
Finland	15.7 (15.3 - 16.1)	14.6 (14.3 - 14.8)	14.2 (14.0 - 14.4)	1.5 / 0.3
Denmark	15.8 (15.4 - 16.2)	14.5 (14.2 - 14.7)	13.8 (13.7 - 13.8)	2.1 / 0.7
Ireland	17.8 (16.9 - 18.6)	16.0 (15.5 - 16.5)	14.1 (13.9 - 14.3)	3.7 / 1.9
Austria	17.5 (16.6 - 18.3)	16.3 (16.2 - 16.5)	13.6 (13.4 - 13.9)	3.8 / 2.7
Belgium	16.2 (15.7 - 16.8)	15.2 (14.9 - 15.5)	13.4 (13.2 - 13.7)	2.8 / 1.8
Greece	19.2 (18.5 - 19.8)	17.2 (16.7 - 17.6)	15.8 (15.6 - 15.9)	3.4 / 1.4
Italy	19.0 (18.2 - 19.8)	15.3 (15.0 - 15.7)	16.7 (16.5 - 16.8)	2.3 / -1.3
France	19.4 (19.0 - 19.8)	18.5 (18.3 - 18.7)	16.4 (16.2 - 16.6)	3.0 / 2.1
Spain	19.4 (18.8 - 19.9)	18.4 (17.9 - 18.9)	16.4 (16.3 - 16.6)	2.9 / 2.0
Portugal	18.7 (17.8 - 19.5)	16.7 (16.0 - 17.3)	14.8 (14.7 - 15.0)	3.8 / 1.9
Average	17.9	16.3	14.9	3.0 / 1.4
Total life expectancy	WOMEN			
	High	Middle	Low	High-Low / Middle-Low
Finland	18.9 (18.6 - 19.2)	18.6 (18.4 - 18.9)	18.3 (18.2 - 18.5)	0.6 / 0.3
Denmark	17.9 (17.5 - 18.4)	17.4 (17.1 - 17.8)	17.2 (17.1 - 17.2)	0.8 / 0.3
Ireland	21.0 (20.2 - 21.7)	20.1 (19.7 - 20.7)	18.3 (18.1 - 18.5)	2.7 / 1.8
Austria	21.4 (20.7 - 22.1)	21.1 (21.0 - 21.2)	18.4 (18.3 - 18.6)	3.0 / 2.7
Belgium	20.8 (20.4 - 21.2)	20.7 (20.4 - 21.0)	19.1 (18.9 - 19.3)	1.7 / 1.6
Greece	20.6 (19.9 - 21.2)	19.4 (19.0 - 19.8)	18.1 (18.0 - 18.2)	2.5 / 1.3
Italy	22.1 (21.3 - 22.8)	19.6 (19.2 - 20.0)	20.8 (20.7 - 21.0)	1.3 / -1.2
France	23.8 (23.4 - 24.2)	23.9 (23.8 - 24.1)	21.7 (21.6 - 21.9)	2.1 / 2.2
Spain	22.3 (21.6 - 22.9)	22.0 (21.5 - 22.5)	20.4 (20.3 - 20.5)	1.9 / 1.6
Portugal	21.4 (20.7 - 22.2)	20.6 (20.0 - 21.2)	18.5 (18.3 - 18.6)	3.0 / 2.2
Average	21.0	20.4	19.1	1.9 / 1.3

Results 4

Life expectancy without disability	MEN			
	High	Middle	Low	High-Low / Middle-Low
Finland	7.8 (7.1 – 8.7)	5.9 (5.3 – 6.6)	5.2 (4.8 - 5.7)	2.6 / 0.7
Denmark	9.7 (8.7 – 10.7)	8.2 (7.4 – 8.8)	6.5 (6.0 – 7.1)	3.2 / 1.6
Ireland	14.2 (12.5 - 15.7)	11.3 (10.3 – 12.2)	9.1 (8.6 – 9.6)	5.1 / 2.2
Austria	11.8 (9.8 – 13.7)	9.1 (8.5 – 9.6)	7.2 (6.7 – 7.7)	4.7 / 1.9
Belgium	11.0 (10.1 – 12.2)	9.6 (8.8 – 10.4)	8.1 (7.6 – 8.7)	2.9 / 1.5
Greece	15.4 (14.1 – 16.5)	12.1 (11.2 – 13.0)	9.9 (9.6 – 10.3)	5.4 / 2.2
Italy	15.8 (14.4 – 17.1)	12.5 (11.9 – 13.2)	11.4 (11.1 – 11.8)	4.3 / 1.1
France	13.0 (12.0 – 14.0)	9.4 (8.7 – 10.0)	7.3 (6.9 – 7.8)	5.6 / 2.0
Spain	15.2 (14.1 – 16.4)	13.1 (12.0 – 14.2)	9.8 (9.4 – 10.1)	5.5 / 3.4
Portugal	14.0 (12.1 – 15.7)	12.2 (10.4 – 13.8)	7.7 (7.4 – 8.1)	6.2 / 4.4
Average	12.8	10.3	8.2	4.0 / 2.1
Life expectancy without disability	WOMEN			
	High	Middle	Low	High-Low / Middle-Low
Finland	8.6 (7.7 – 9.5)	7.2 (6.5 – 8.0)	6.0 (5.6 – 6.6)	2.5 / 1.2
Denmark	9.4 (8.4 – 10.5)	8.7 (7.8 – 9.6)	6.9 (6.3 – 7.4)	2.6 / 1.8
Ireland	16.2 (14.4 – 17.8)	13.9 (12.8 – 15.1)	11.4 (10.8 – 12.0)	4.7 / 2.5
Austria	13.9 (11.6 – 15.9)	11.6 (10.9 – 12.2)	9.2 (8.7 – 9.7)	4.7 / 2.4
Belgium	13.5 (12.3 – 14.6)	12.8 (11.6 – 13.7)	11.1 (10.5 – 11.8)	2.3 / 1.6
Greece	15.9 (14.4 – 17.3)	13.5 (12.5 – 14.5)	10.9 (10.5 – 11.2)	5.0 / 2.6
Italy	17.5 (15.7 – 19.2)	15.5 (14.6 – 16.3)	13.3 (12.9 – 13.7)	4.2 / 2.2
France	14.8 (13.6 – 16.0)	11.6 (10.8 – 12.4)	8.7 (8.3 – 9.2)	6.1 / 2.9
Spain	16.5 (15.0 – 17.9)	14.8 (13.6 – 16.1)	10.8 (10.5 – 11.1)	5.6 / 4.0
Portugal	14.3 (12.1 – 16.3)	13.7 (11.5 – 15.8)	8.0 (7.7 – 8.4)	6.3 / 5.7
Average	14.0	12.3	9.6	4.4 / 2.7

Conclusions

- Populations of higher level of educational expect to live sizeably longer and healthier before or even after retirement age
- Even larger inequalities exist between DFLEs then between LEs
- Larger inequalities in men than in women in terms of LE

Thank you!