

PUBLIC SPENDING ON HEALTH AND LONG-TERM CARE : A NEW SET OF PROJECTIONS

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and

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**2ND MEETING OF THE JOINT NETWORK ON
FISCAL SUSTAINABILITY OF HEALTH SYSTEMS**

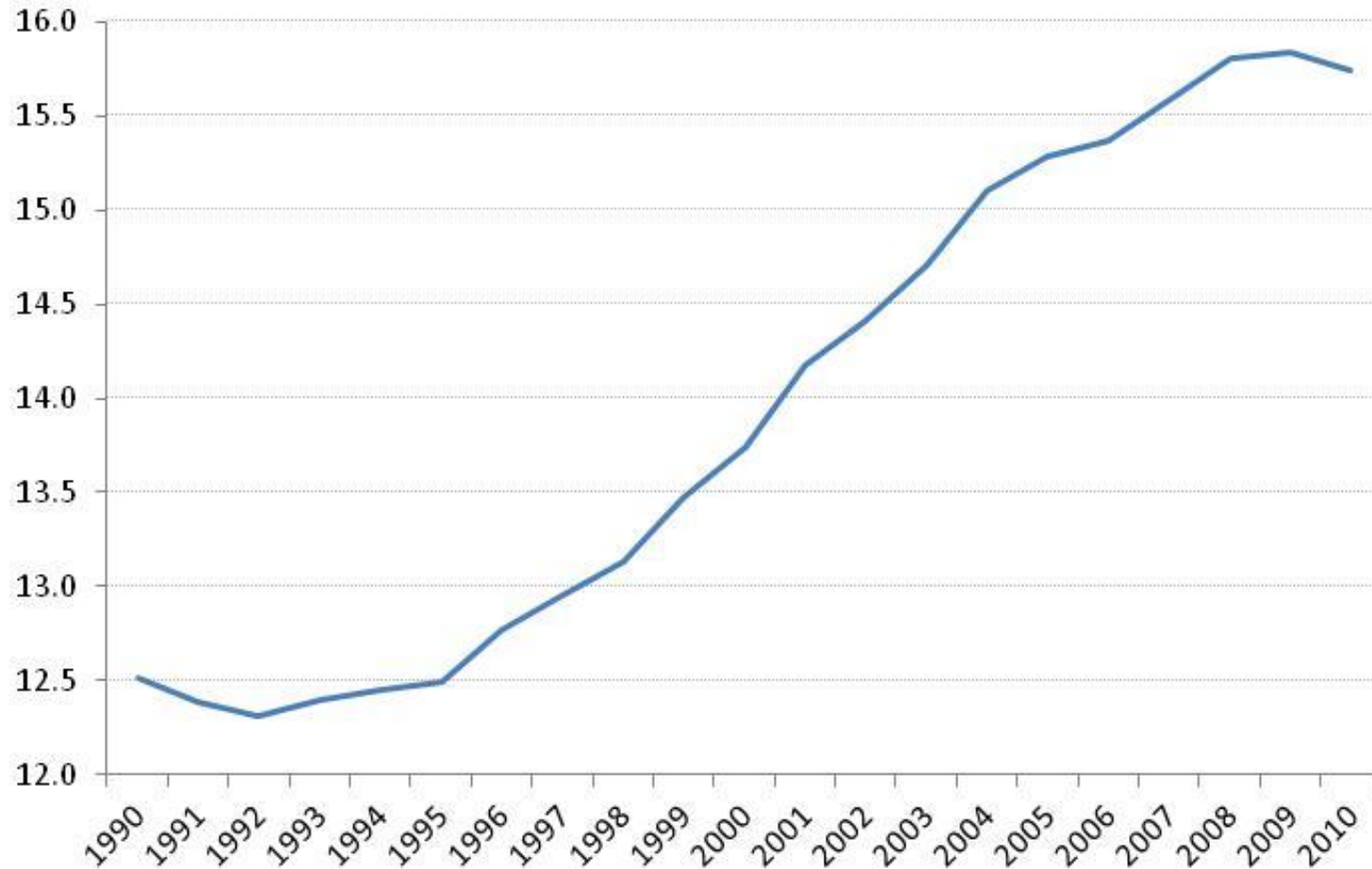
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Steady growth of public Health + LTC spending

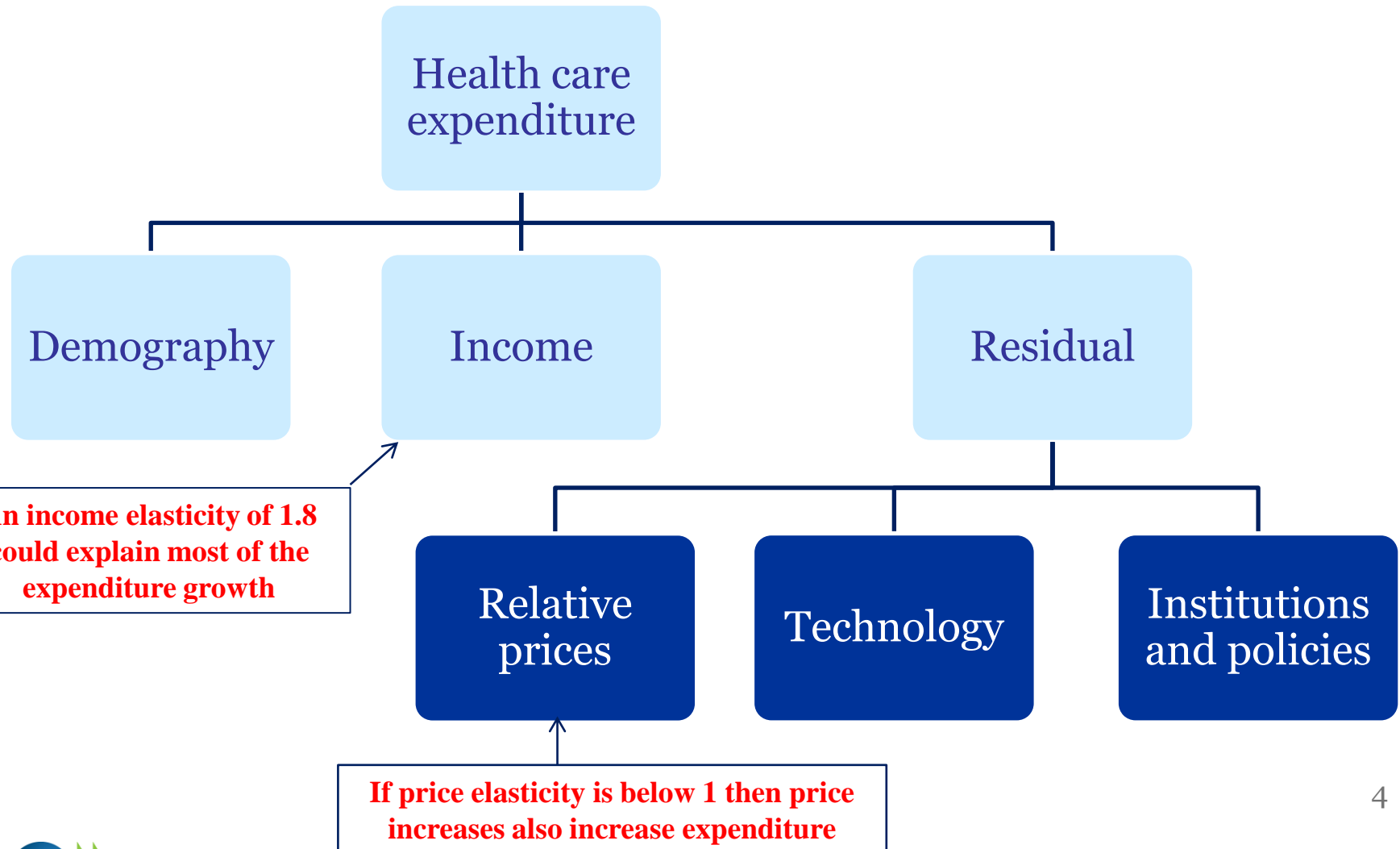
Public Health and LTC expenditure as a % of GDP, OECD countries



The share of health and LTC expenditure has increased in total public expenditure (unweighted average of OECD countries)

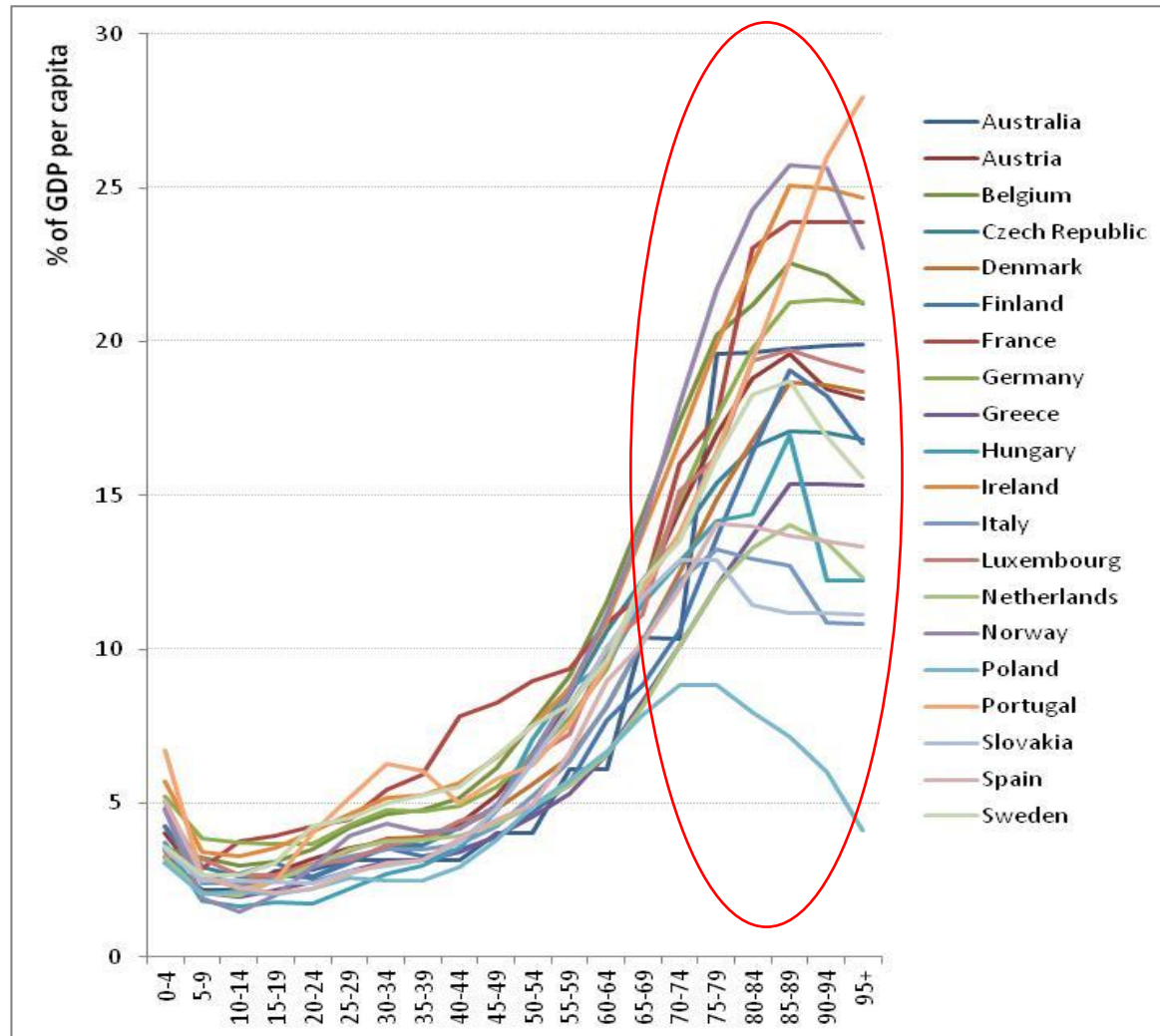


WHAT DRIVES HEALTH EXPENDITURES?

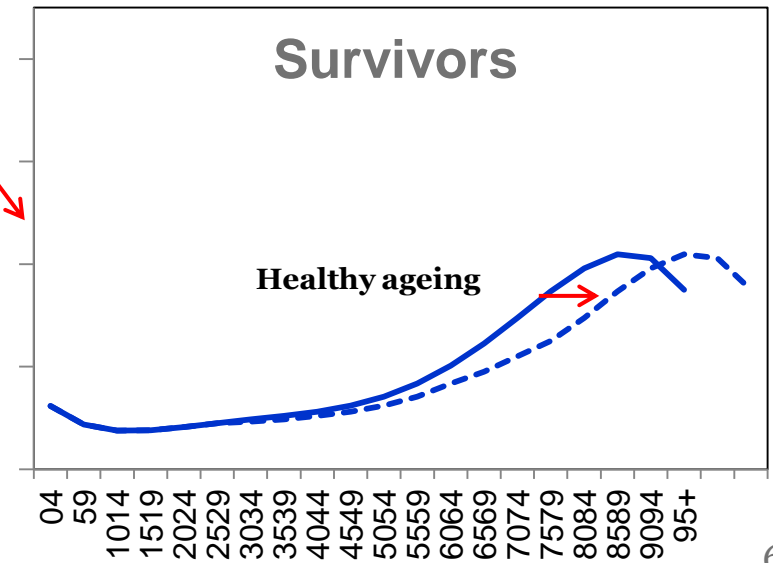
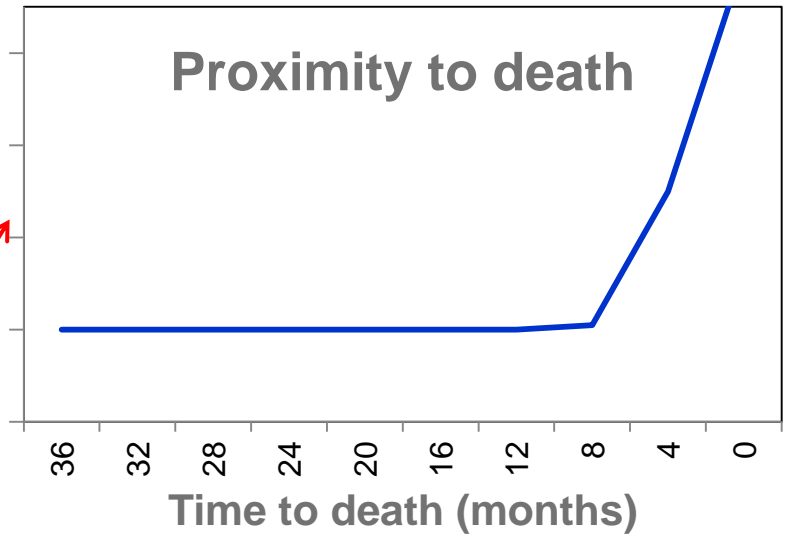
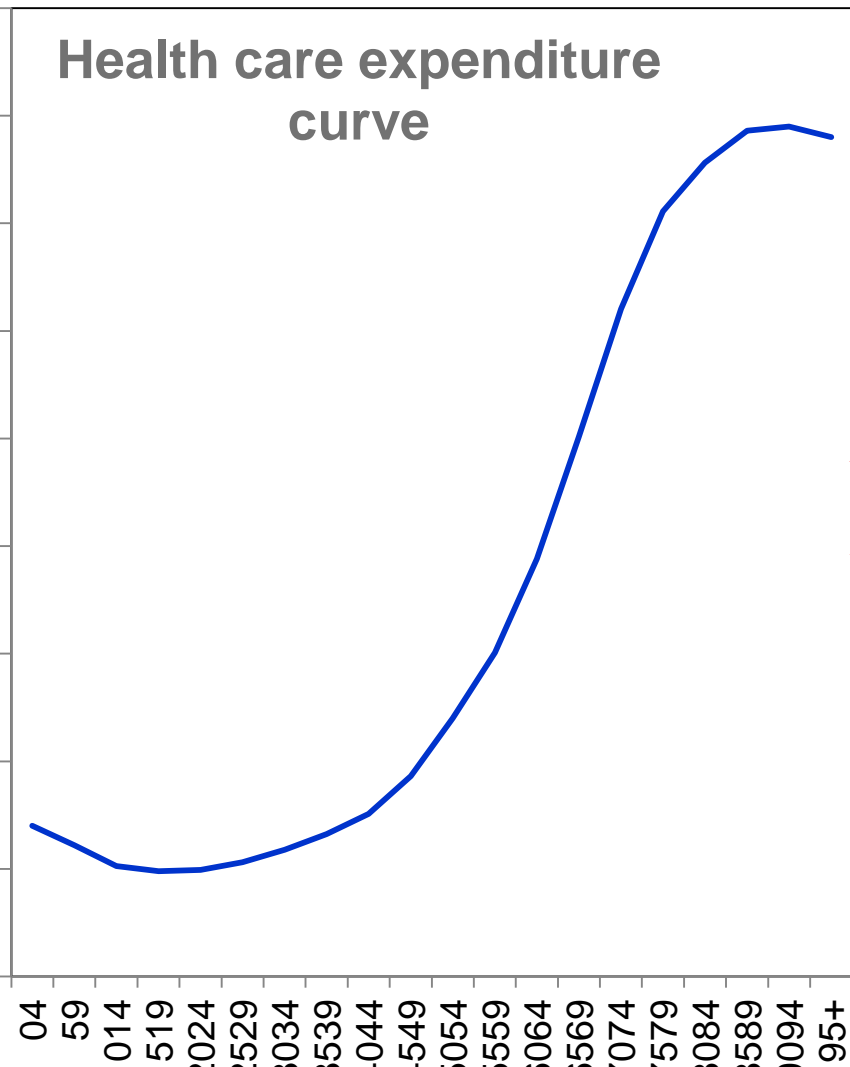


1) Demography: The projections are based on health care expenditure profiles by age-groups (normalised by GDP p.c.)

Spending p.c.
in group [i]
normalised by
GDP p.c.



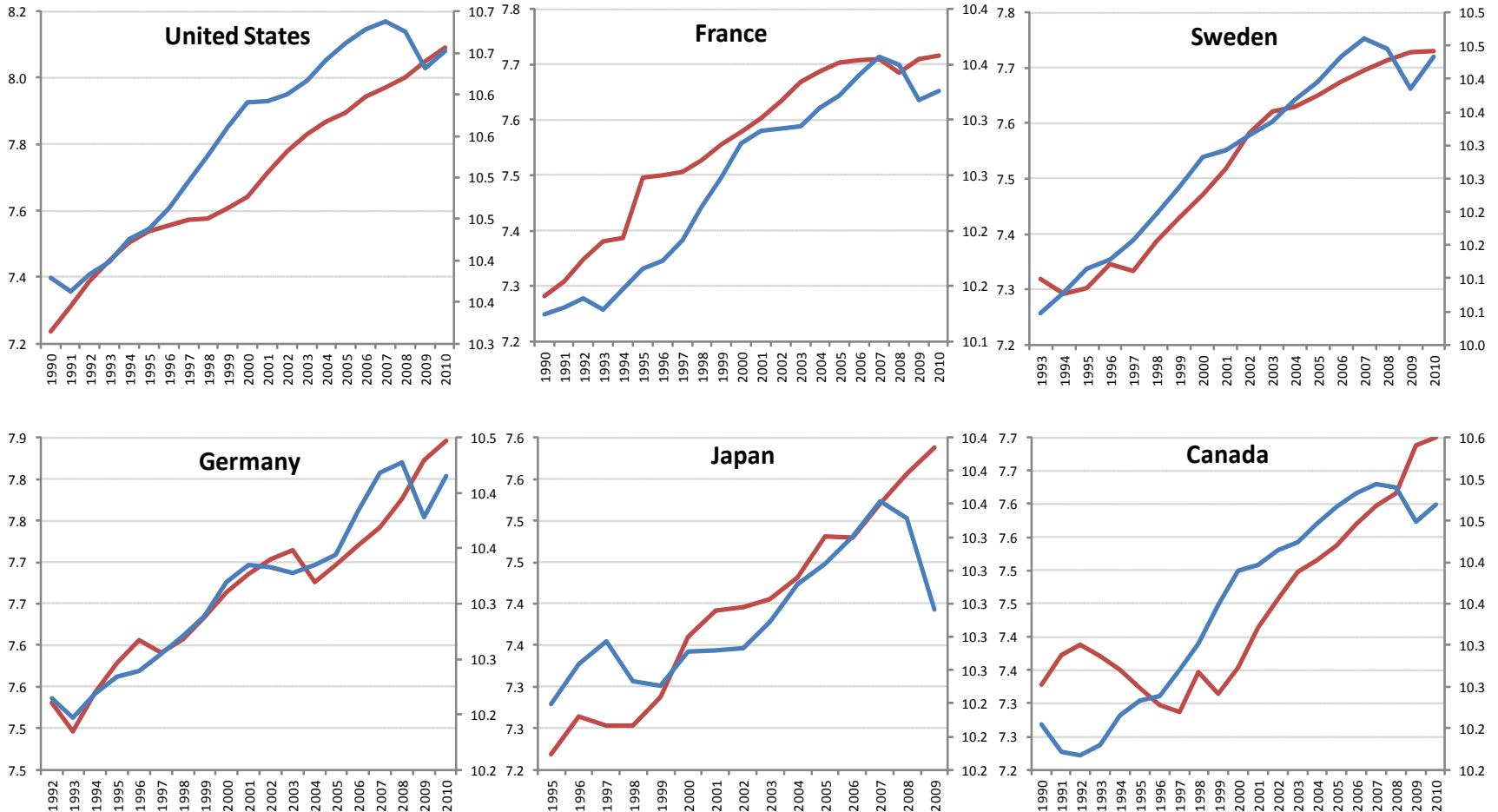
Why health care expenditure curves display such a profile?



2) Income: Health expenditures rise with income...

Public health expenditure and GDP (in logs)

— Health expenditure per capita (LHS) — GDP per capita (RHS)



... but what is the value of the Health income elasticity?

Papers	Elasticity
Individuals (Micro)	
Newhouse and Phelps (1976)	<1
Manning et al. (1987)	≈0
Regions (Intermediate)	
Feldstein (1971)	0.5
Backer (1997)	0.8
Nations (Macro)	
Newhouse (1977)	1.3
Fogel (1999)	1.6
Taking into account cointegration	
Baltagi and Moscone (2010)	<1
Bech <i>et al.</i> (2011)	≈1
Dreger and Reimers (2005)	≈1
Freeman (2003)	≈0.8
Narayan <i>et. al</i> (2011)	<1
Using Instrumental Variables	
Acemoglu <i>et al.</i> (2009)	0.7
Holly <i>et al</i> (2011)	0.75-0.95 (In the fixed effect model and much smaller in the dynamic one)
This paper	0.5 - 1.0 (Depending on the specification)

3) Residual: Estimation of the expenditure residual (1995-2009) assuming an income elasticity of 0.8

Average annual growth rate (in %)

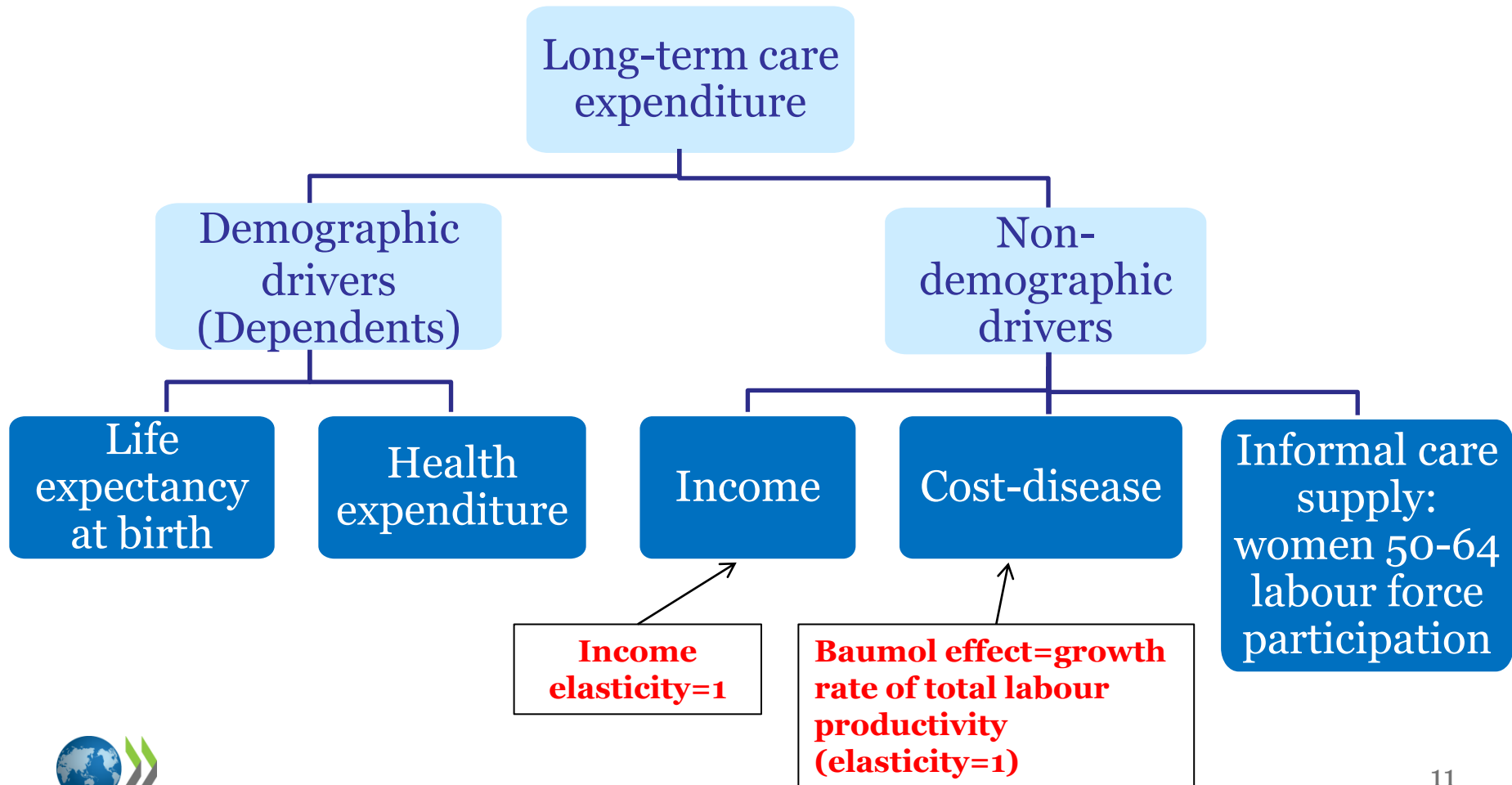
	Health spending	Age effect	Income effect	Residual	<i>Memo item:</i> Residual with unitary income elasticity
Selected countries:					
Australia	4.1	0.4	1.7	1.8	1.4
Canada	2.6	0.6	1.3	0.8	0.5
France	1.6	0.5	0.9	0.3	0.0
Germany	1.7	0.6	0.8	0.2	0.0
Italy	3.1	0.6	0.4	2.1	2.0
Japan	2.7	1.2	0.4	0.7	0.5
Korea	11.0	1.1	3.1	6.5	5.7
Portugal	4.6	0.6	1.2	2.4	2.0
Sweden	3.2	0.2	1.6	1.4	1.0
United States	3.6	0.3	1.1	2.3	2.0
Brazil	4.8	0.6	1.2	2.9	2.6
China	11.2	0.6	7.3	3.0	1.3
India	6.6	0.3	4.2	2.0	1.0
OECD total average	4.3	0.5	1.7	2.0	1.5
BRICS average	6.2	0.5	3.2	2.5	1.7
Total average	4.6	0.5	2.0	2.0	1.5

How to project the residual?

- Part of the residual expenditure growth can be explained (cf. econometric estimates):
 - Relative Prices and Technology 0.8% p.a.
 - Other (eg. institutions and policies) 0.9% p.a. } 1.7% p.a.
- But there is not enough information to project these drivers individually
- Thus the residual is projected as a whole (as in 2006) and sensitivity to different assumptions tested
- Residual growth is the same for all countries in order not to extrapolate country-specific idiosyncrasies over a long period (e.g. country-fixed effects)

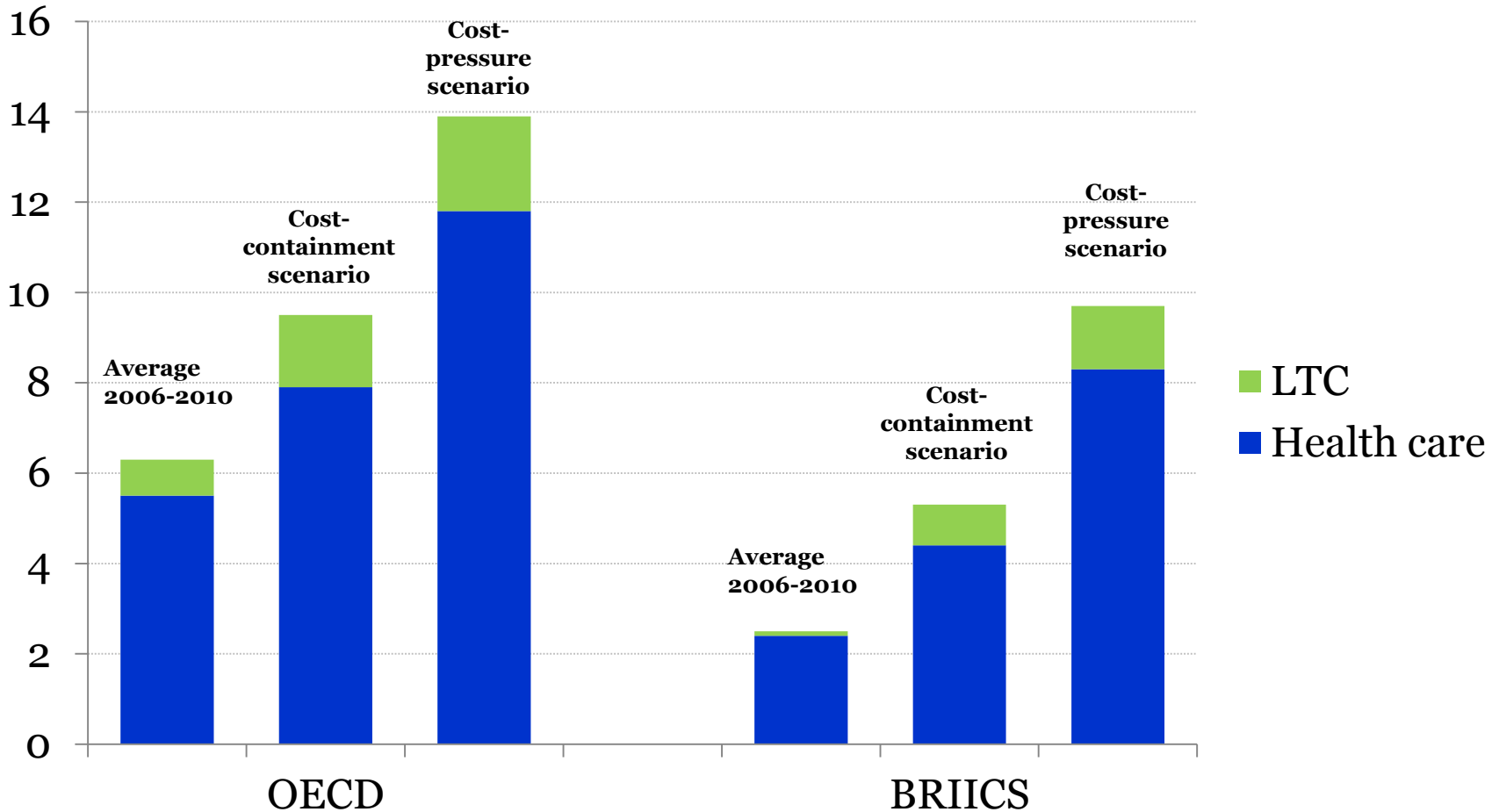
II. Projections of Long-term Care expenditure

The drivers of LTC expenditure



Projected levels of public Health and LTC expenditure

(as a % of GDP in 2060)



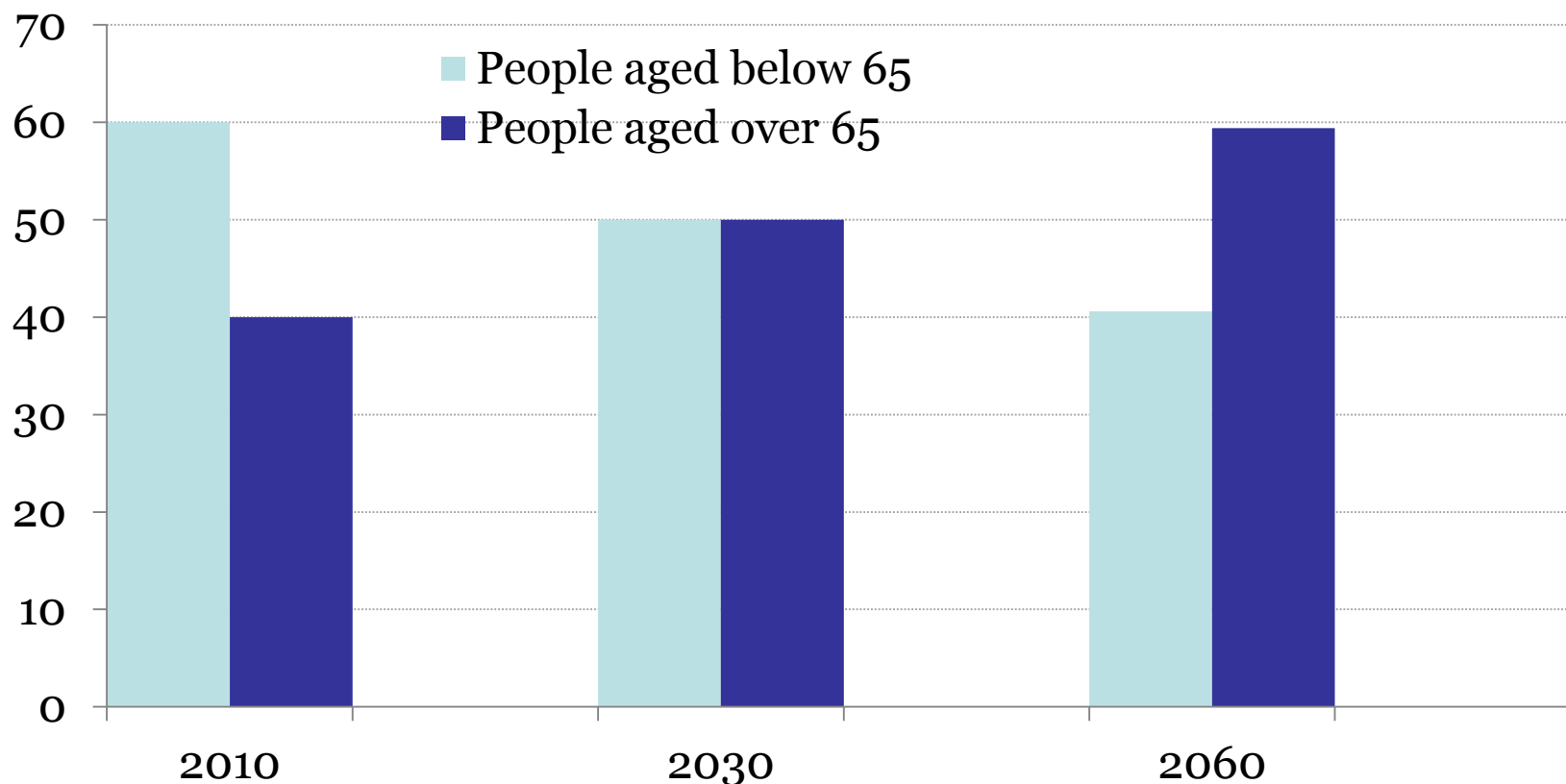
Cost pressure: healthy ageing, income elasticity=0.8, residual=1.7% per year

Cost containment: healthy ageing, income elasticity=0.8, residual phasing out over the projection period

Convergence mechanism based on differences across countries in health shares to GDP in the base year compared with OECD average

Changing structure of health expenditures

Shares of expenditure by age in total expenditure



NB: Non-demographic effects are assumed to be homothetic across ages, so they do not change the structure

Results are robust to changing assumptions

Health expenditure

	Income elasticity=0.6	Income elasticity=1	Country specific residual	Compression of morbidity	Expansion of morbidity
Percentage point deviations from cost-containment scenario in 2060					
OECD average	-0.6	0.8	0.9	-0.7	0.8
BRIICS	-1.0	1.4	0.0	-0.8	1.2
Total average	-0.7	0.8	0.8	-0.7	0.9

LTC expenditure

	Income elasticity=2	Life expectancy plus 2 standard deviation	Life expectancy minus 2 standard deviation	Cost-pressure health-care expenditure
Percentage point deviations from cost-containment scenario in 2060				
OECD average	0.9	0.3	-0.2	0.1
BRIICS	0.9	0.3	-0.2	0.1
Total average	0.9	0.3	-0.2	0.1

THANK YOU !