

Macroeconomic implications of healthcare

Zsolt Darvas

Based a joint paper with Nicolas Moës, Yana Myachenkova
and David Pichler

Health care and macro-economics in Europe

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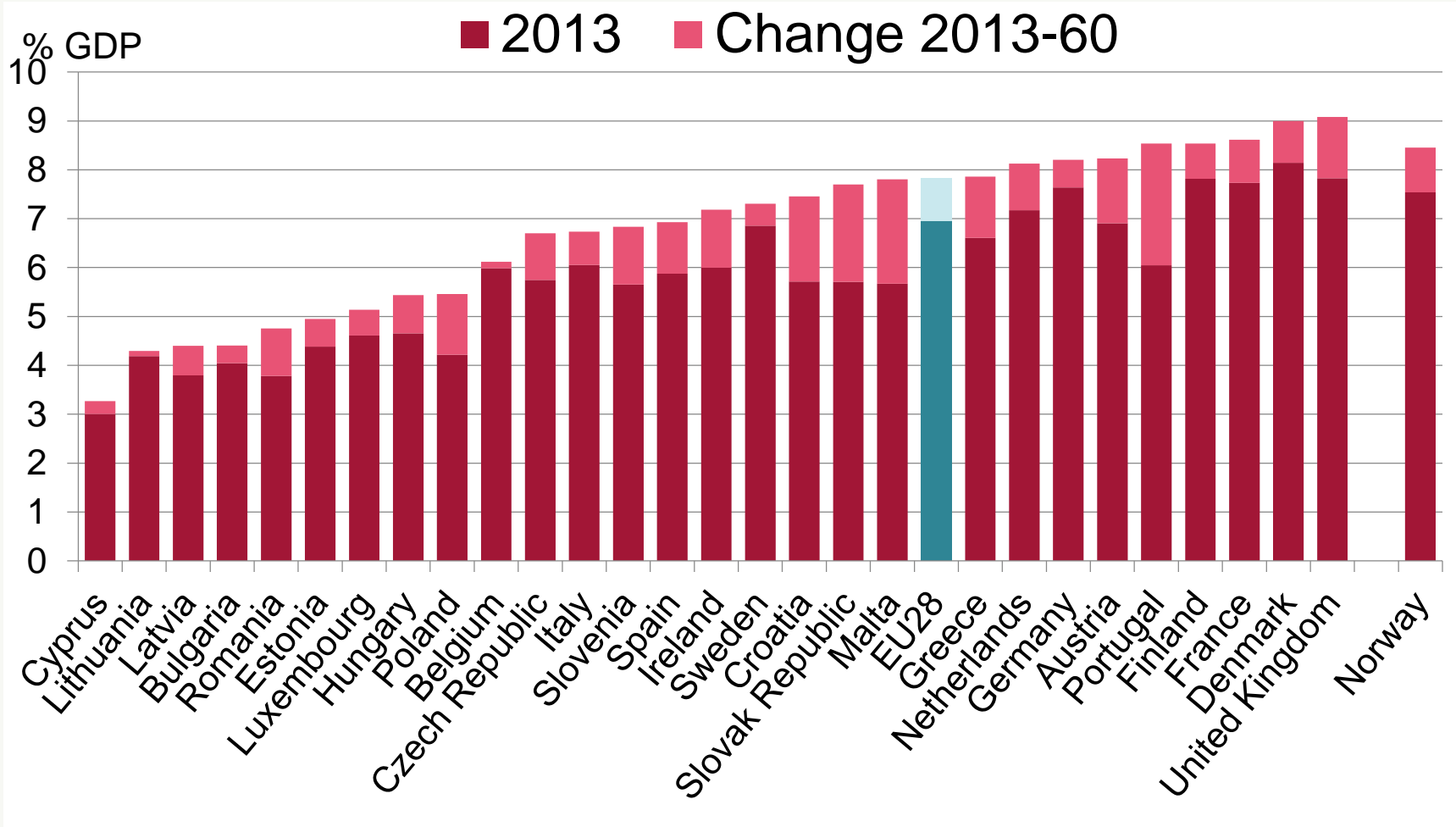
A global overview: income and health

	GDP per capita (PPP US\$, 2016)	Health expenditure per capita (PPP US\$, 2014)	Mortality rate under-5 (per 1000, 2016)	Life expectancy at birth (years, 2015)
North America	56,110	8,925	6	79
European Union	39,630	3,524	4	81
Middle East & North Africa	19,107	957	24	73
East Asia & Pacific	16,985	893	16	75
Latin America & Caribbean	15,418	1,110	18	75
South Asia	6,064	233	48	68
Sub-Saharan Africa	3,711	201	78	60
World	16,143	1,271	41	72

Key questions

- How do health care systems and health outcomes interact with the macroeconomy?
 - Fiscal aspect: health care spending and fiscal sustainability
 - Growth/labour market aspect: work vs sickness, productivity, human capital
 - Inequality: might adversely affect growth
 - How to determine the public health care budget?
 - How to measure the efficiency of health care system?
- What are the economic values of investing in healthcare?

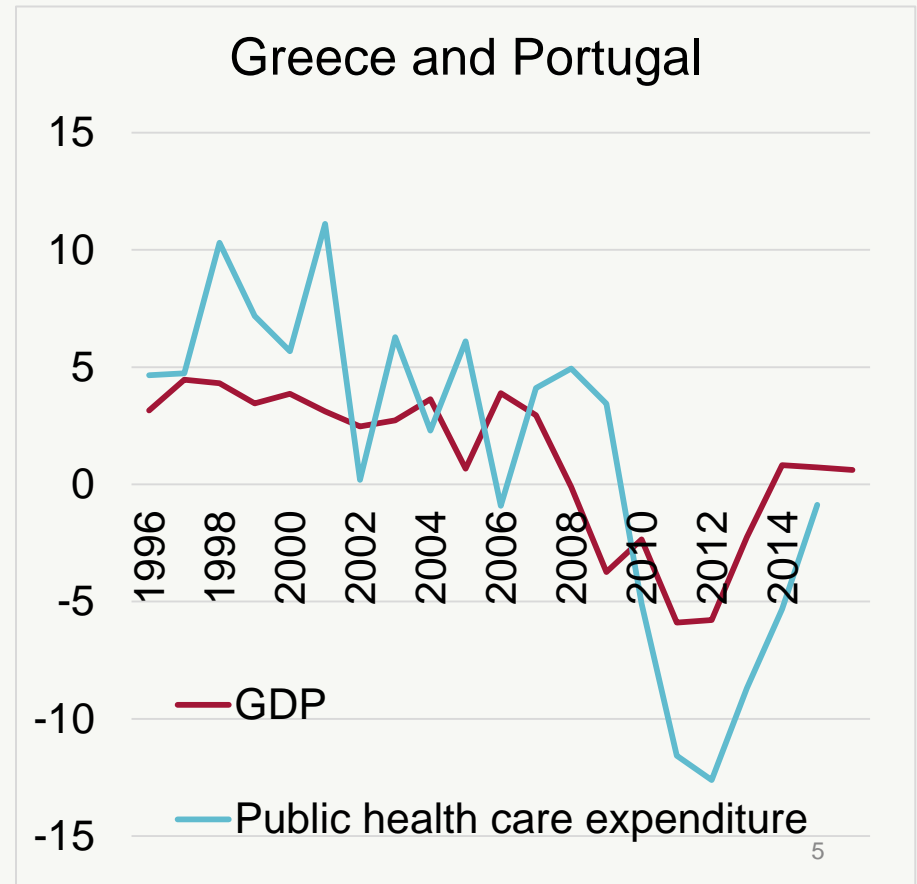
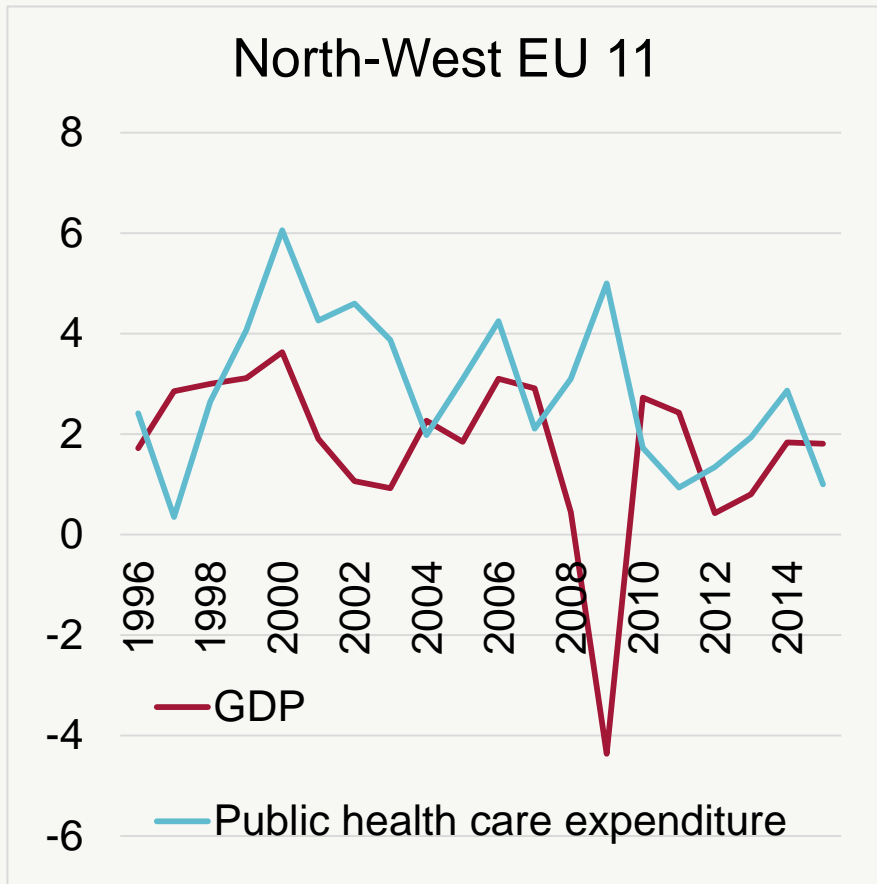
Public spending on health care as a percentage of GDP, 2013 to 2060 – OECD's baseline scenario



Source: OECD Health at a Glance: Europe 2016.

Crisis years: health care spending growth preserved in north-west EU, cut in the south

Annual % growth of GDP and public health care expenditures (constant prices)



Optimal health spending: Objectives

- Optimal spending: which achieves the objectives
- When multiple objectives and limited resources → trade-offs
- Value in investing in health care vs. opportunity cost
- Ultimate objectives:
 - Improving health / Effectiveness
 - Meet community preferences
 - Fair contributions / Accessibility
 - (Resilience)
 - (Timeliness)
 - (Efficiency)

Optimal health spending: Key aspects

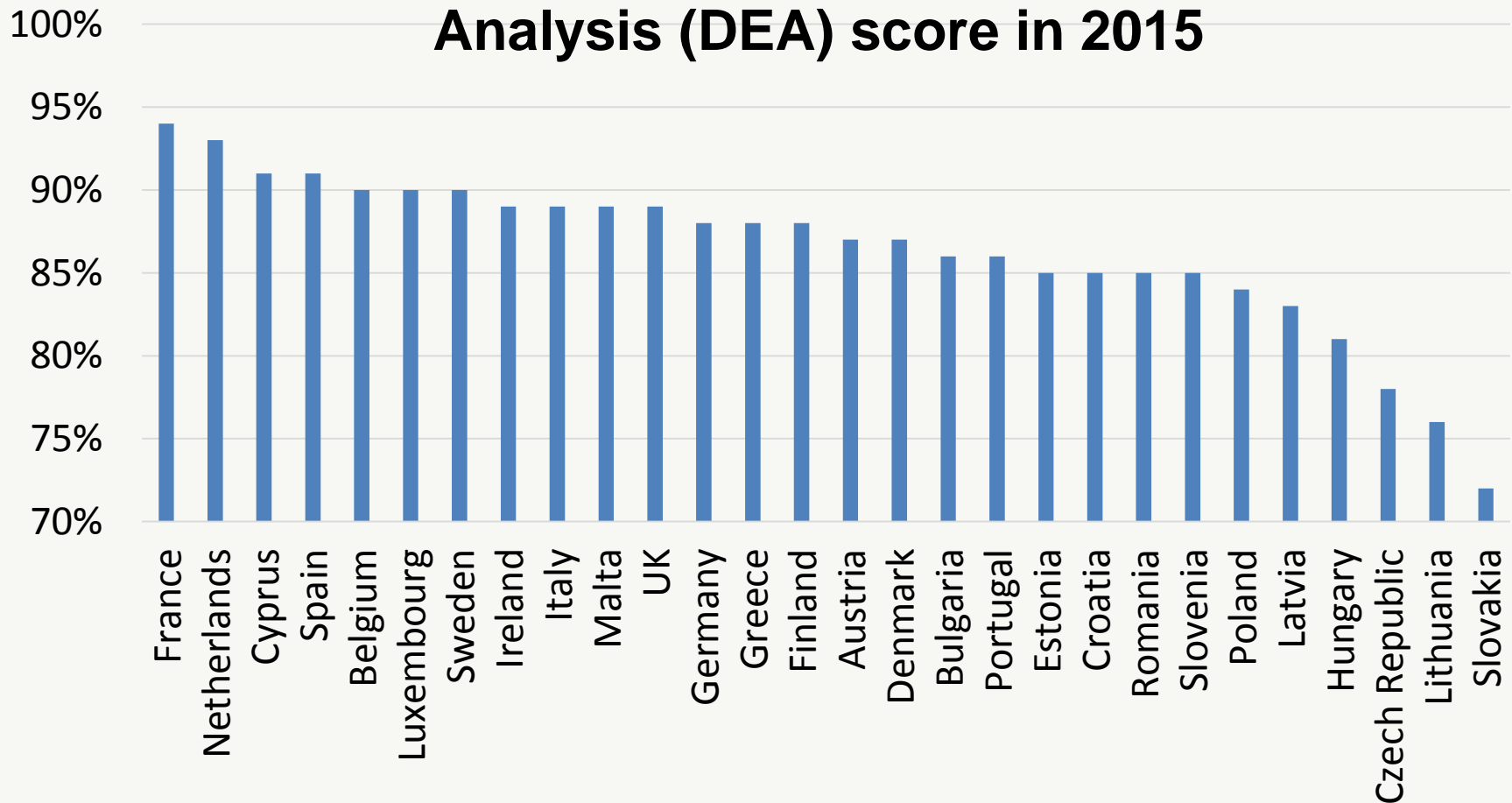
- Population
 - Preferences for health relative to other aspects of life
 - Income
 - Age structure and epidemiological profile of the population
- Health systems
 - Relative price of different health-enhancing activities and technologies
 - Relative price of health relative to other aspects of life
 - Market failures: 1. asymmetric info between providers and patients, 2. adverse selection in insurance markets
 - Effectiveness at improving health outcomes, ensuring accessibility and satisfying current population's desires
- Macroeconomic implications of health
- Non-health policies affecting health-related aspects

How to measure health care spending efficiency?

- No consensus on which countries perform more efficiently or how to measure health efficiency across countries
- “some of the reasons for the paucity of efficiency data include data differences and inconsistencies, lack of consensus on appropriate methods and the scope of research, and difficulties directly attributing health outcomes to health care inputs” (The European Observatory on Health Systems and Policies (2016))
- Factors outside the health care system such as geography, genetics or cultural lifestyle also influences outcomes

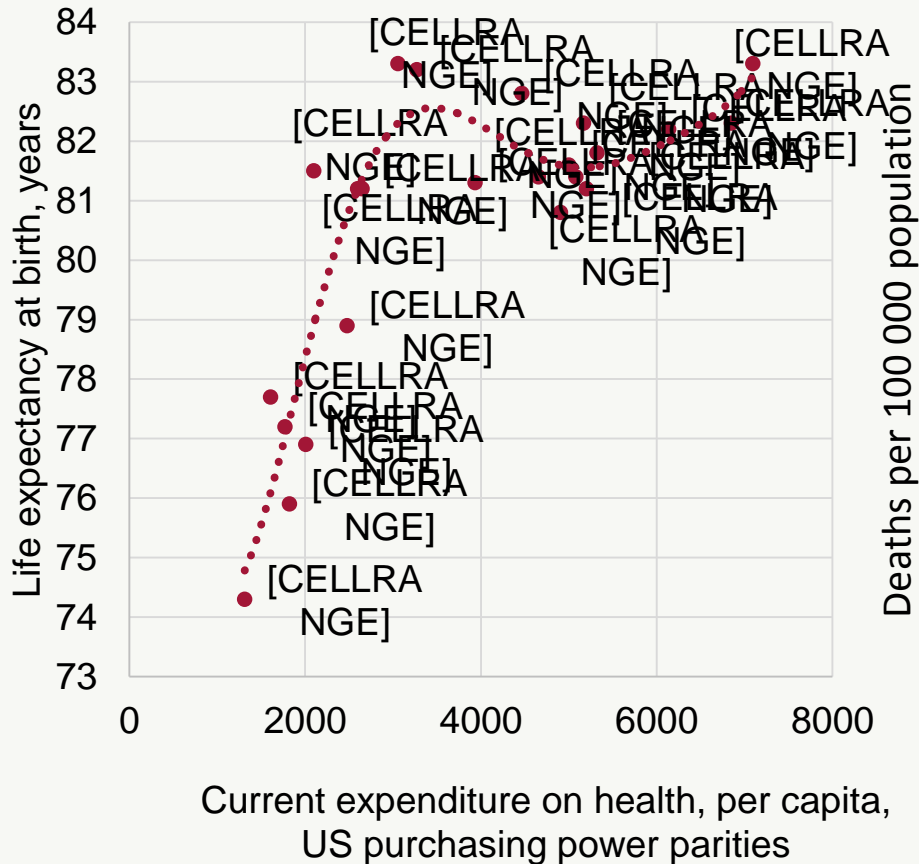
European Commission 2015 efficiency ranking

Average output-oriented Data Envelopment Analysis (DEA) score in 2015

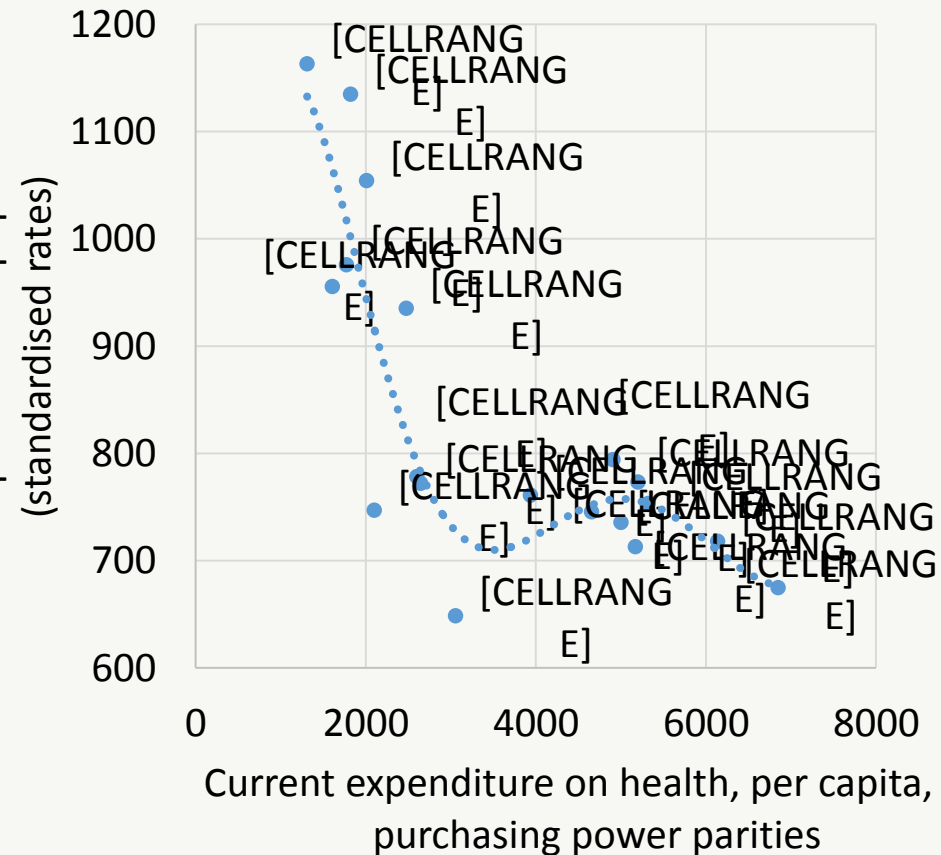


Health spending seems to level off

Spending vs life expectancy

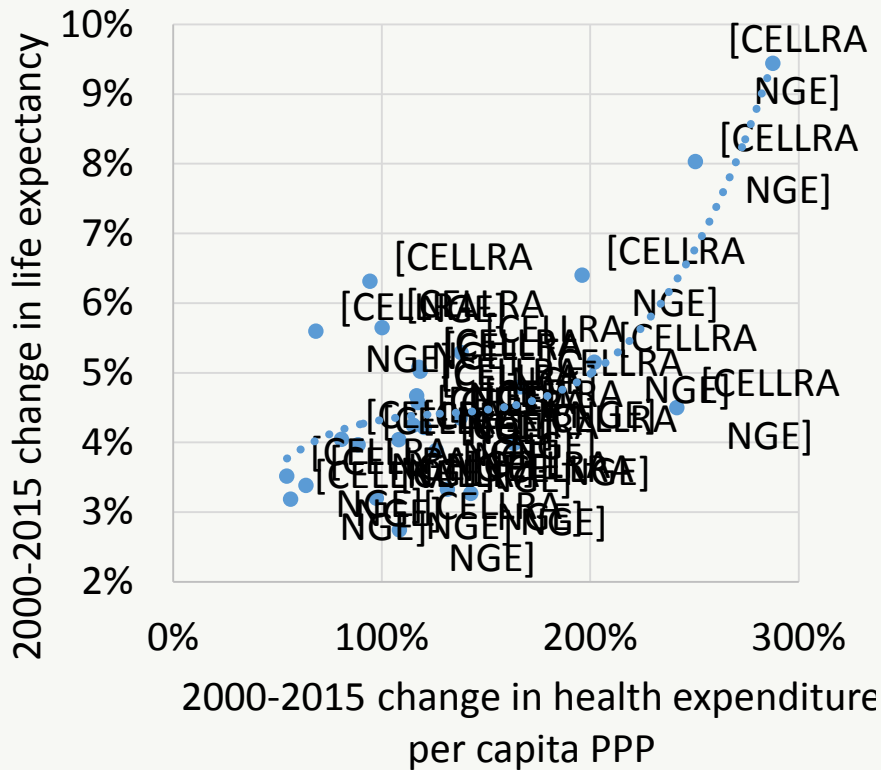


Spending vs mortality

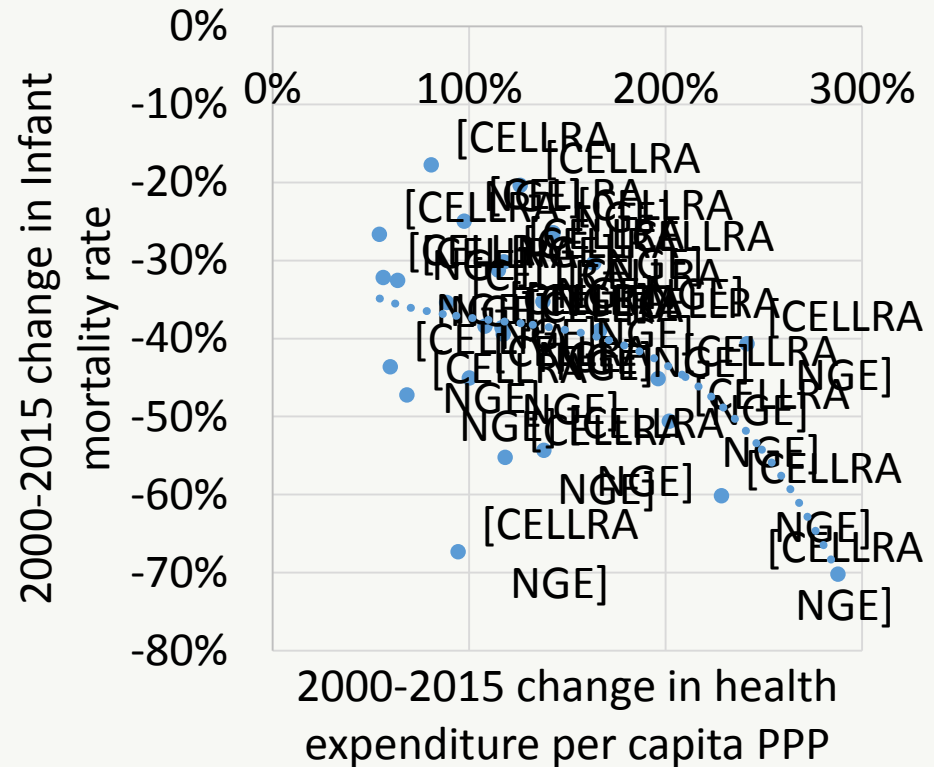


But change in health spending associates with improved outcomes

Change in spending vs change in life expectancy



Change in spending vs change in mortality



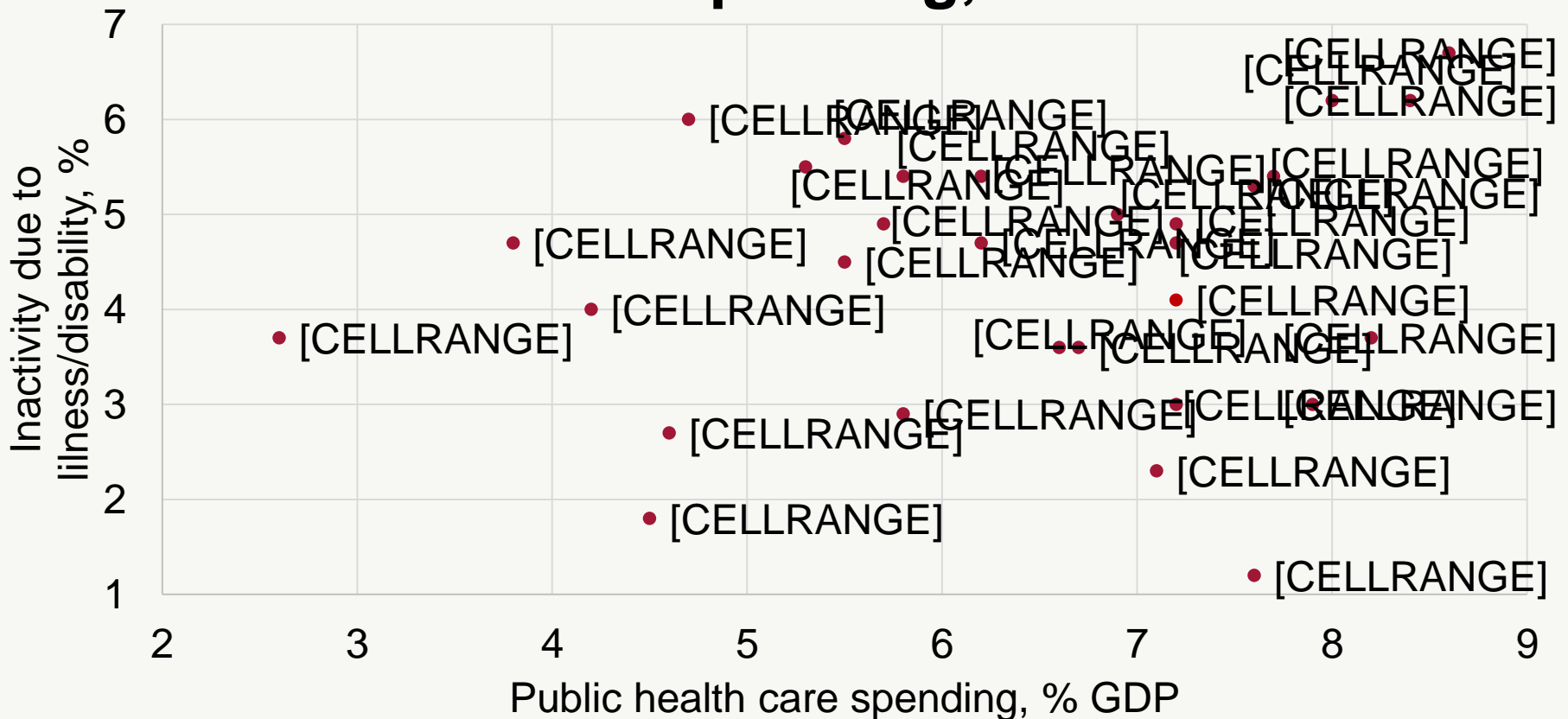
Yet those countries spend much more that spent little in earlier years; these countries had weaker outcomes earlier so a faster improvement in normal

Health and the labour market

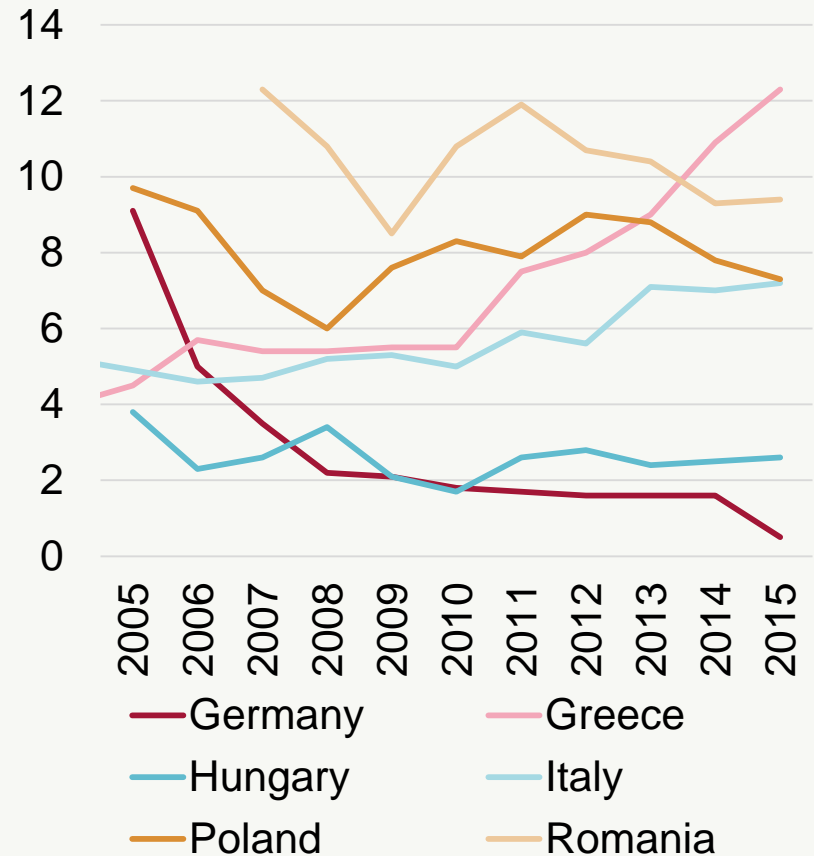
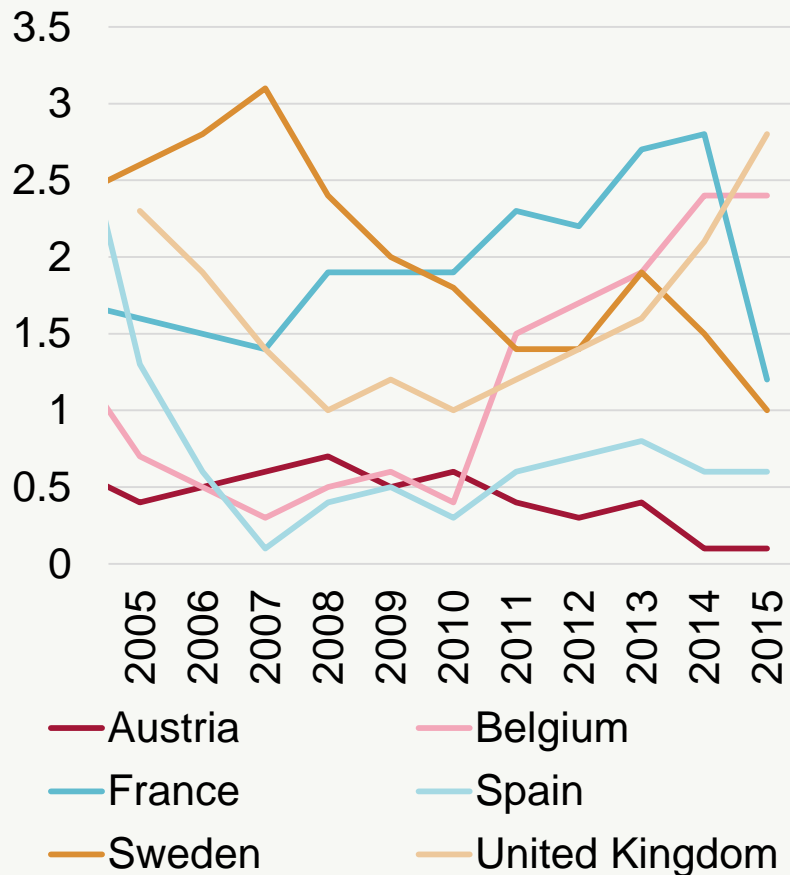
- There is a direct link between health and economic activity through the labour market (ill health prevents work, lowers productivity) → forgone output plus increased cost to support the sick
- Some of the inactive due to health (4.1% of working age population in EU28) could be integrated to labour markets
- There is also an increasing ‘cost’ due to improved health which stems from longevity and aging
- There is no correlation between health care expenditure and inactivity due to sickness or disability (next chart)
- Incentives: while higher expenditure may actually improve the health conditions of citizen, a more developed welfare state reduces the incentives to work

No obvious relationship between health care spending and inactivity due to illness and disability

Inactivity due to illness or disability vs public health spending, 2015



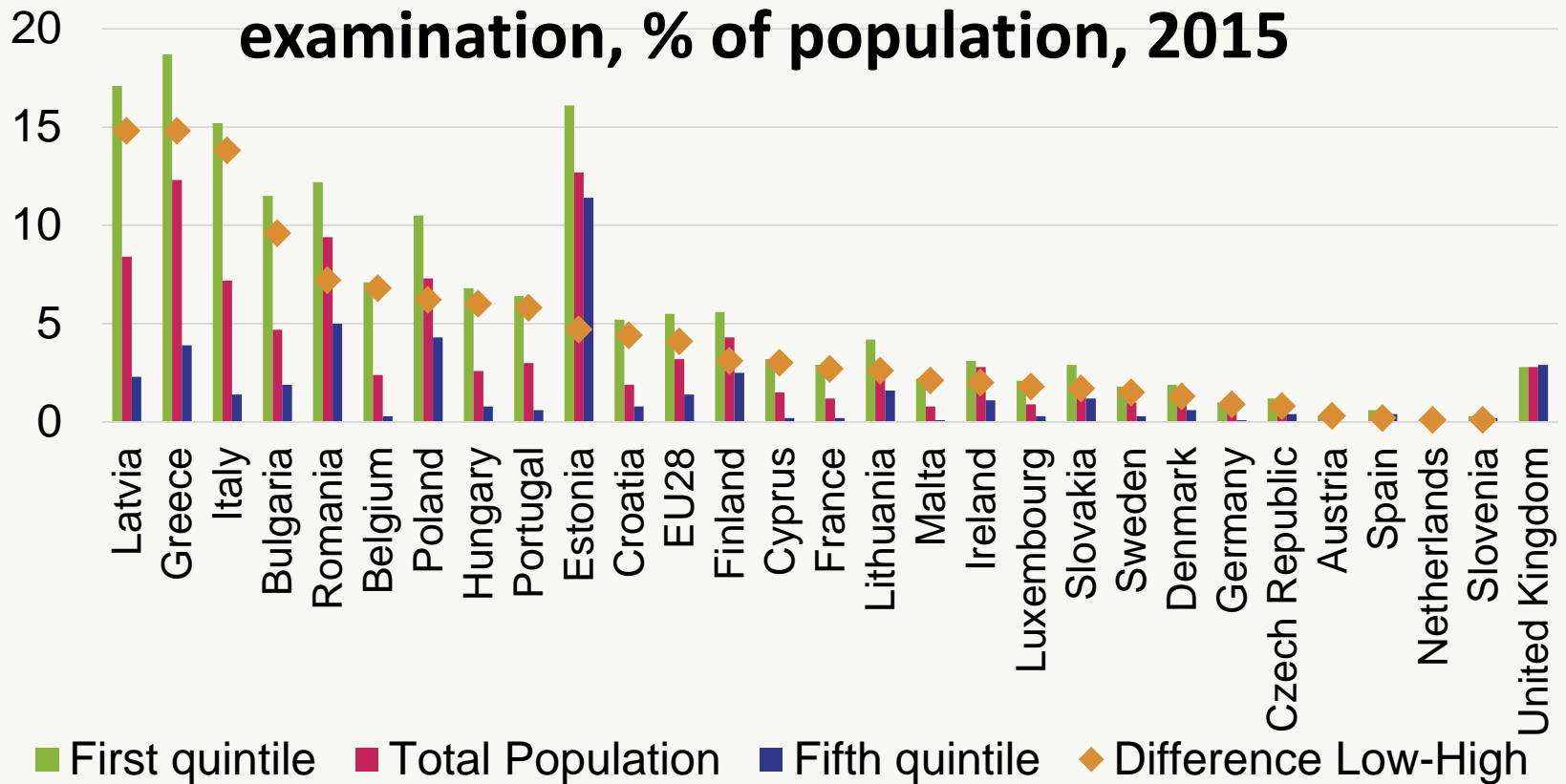
Unmet medical needs: diverse level and development



Source: Eurostat's 'Self-reported unmet needs for medical examination by sex, age, main reason declared and income quintile [hlth_silc_08]' dataset

Large health inequality in some countries

Self-reported unmet needs for medical examination, % of population, 2015



Source: Eurostat [hlth_silc_08]

Note: share of individuals who reported main reason of unmet needs is either too expensive, too far to travel or waiting list.

Inequality

- If everyone (including the poor) receives the same good quality healthcare → it could alleviate income inequalities
- But previous chart suggests this is not the case in many EU countries
- Poor and less educated people are less healthy and live shorter lives than rich and better educated people
- Inequality in health access and outcomes → income inequality (decreased labour activity and earnings)
- Research shows that parents' health condition has consequences for the cognitive and physical development of their children
- Health and the resulting income inequality might have a negative feedback on economic growth

Conclusions

- Health care and health outcomes have major **macroeconomic implications**: fiscal aspects, labour market, inequality
- **Efficiency** measurement is problematic, yet we find large heterogeneity; learning from best practices
- **Health budget**: if the broader impact of health care on potentially increased revenues and decreased expenditures is neglected, the outcome may lead to a suboptimal allocation of scarce public resources