Research Partnerships to Drive Health and Growth in Europe

Dr Richard Torbett
Chief Economist, EFPIA

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European Federation of Pharmaceutical Industries and Associations
www.efpia.eu

Introducing EFPIA

The European Federation of Pharmaceutical Industries and Associations (EFPIA) represents the pharmaceutical industry operating in Europe. Through its direct membership of 33 national associations and 40 leading pharmaceutical companies, EFPIA is the voice on the EU scene of 1,900 companies. EFPIA counts two specialised companies : Vaccines Europe (VE) and European Biopharmaceutical Enterprises (EBE).

Abbott A Promise for Life
abbvie
Almirall
AMGEN
astellas Leading Light for Life
AstraZeneca
Baxter
Bayer HealthCare
biogen idec
Boehringer Ingelheim
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Chiesi People and ideas for innovation in healthcare
Daiichi-Sankyo
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ESTEVE
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Servier GRUNENTHAL
IPSEN Innovation for patient care
Johnson & Johnson
Lundbeck
MENARINI
MERCK
MERCK Be well
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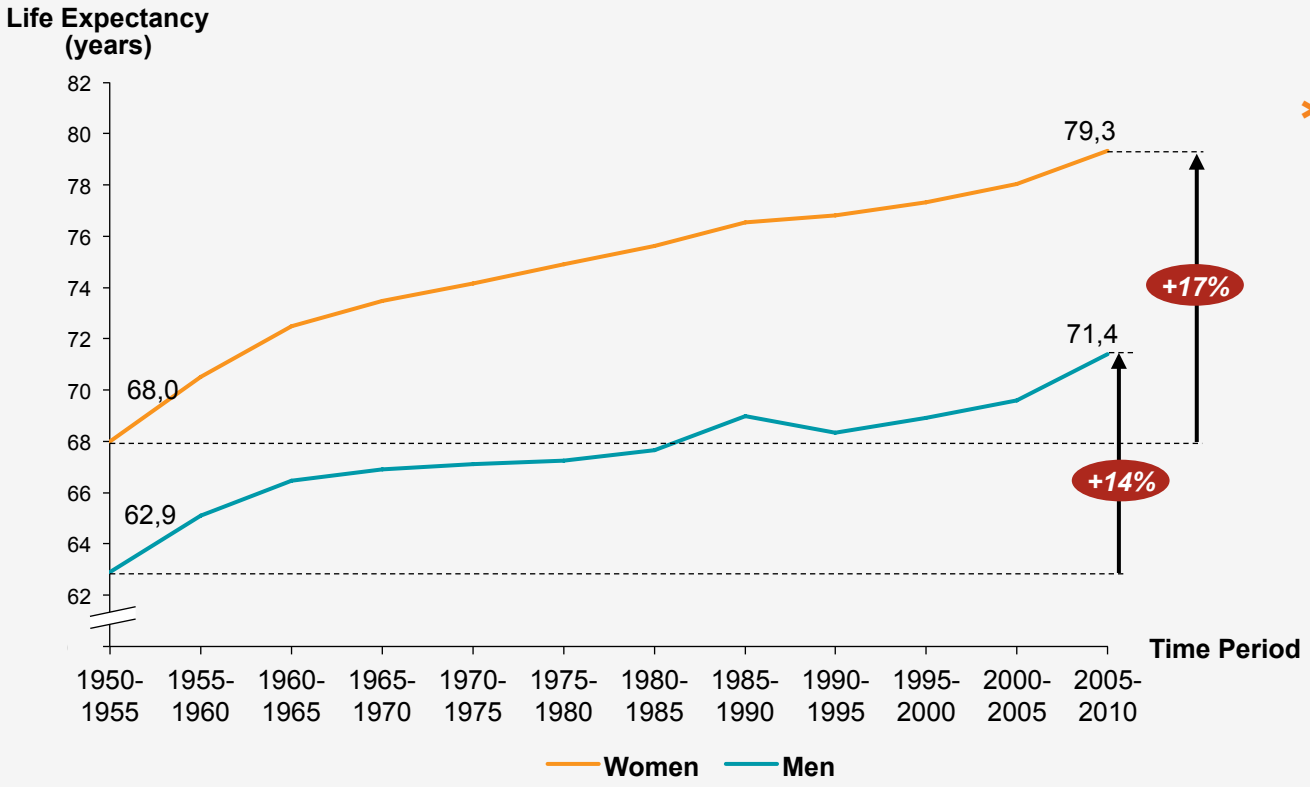
Over the last 60 years Europe has made great strides in improving health outcomes resulting in a 14-17 % increase in life expectancy

Life expectancy at birth for EU27 countries (1950-2010)



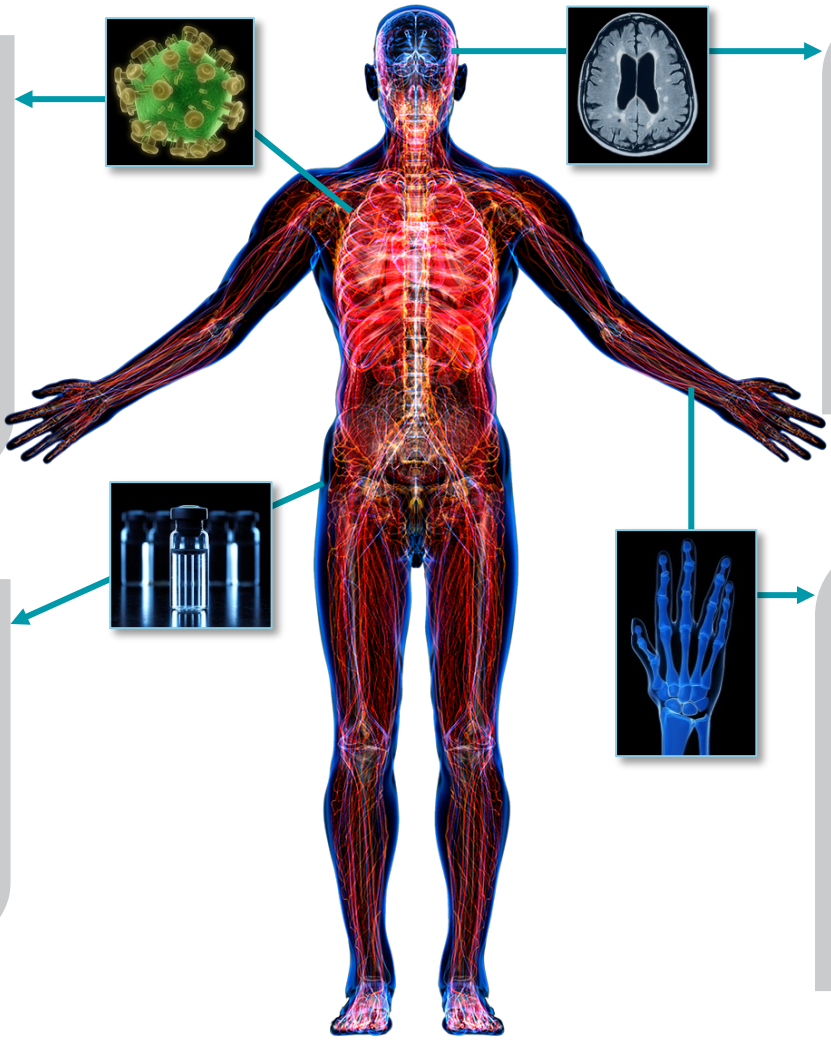
* During the last 60 years, both male and female life expectancies have improved substantially across Europe.

Source: United Nations: World Population Prospects – The 2010 Revision (2011)

Medicines Are Transforming the Treatment of Many Difficult Diseases

HIV/AIDS
In the last two decades, advances in treatment have contributed to a more than 80% decline in death rates and transformed the disease from an acute, fatal illness to a chronic condition.

Cancer
New therapies have contributed to a 20% decline in cancer deaths since the 1990s. Today, 2 out of 3 people diagnosed with cancer survive at least 5 years.

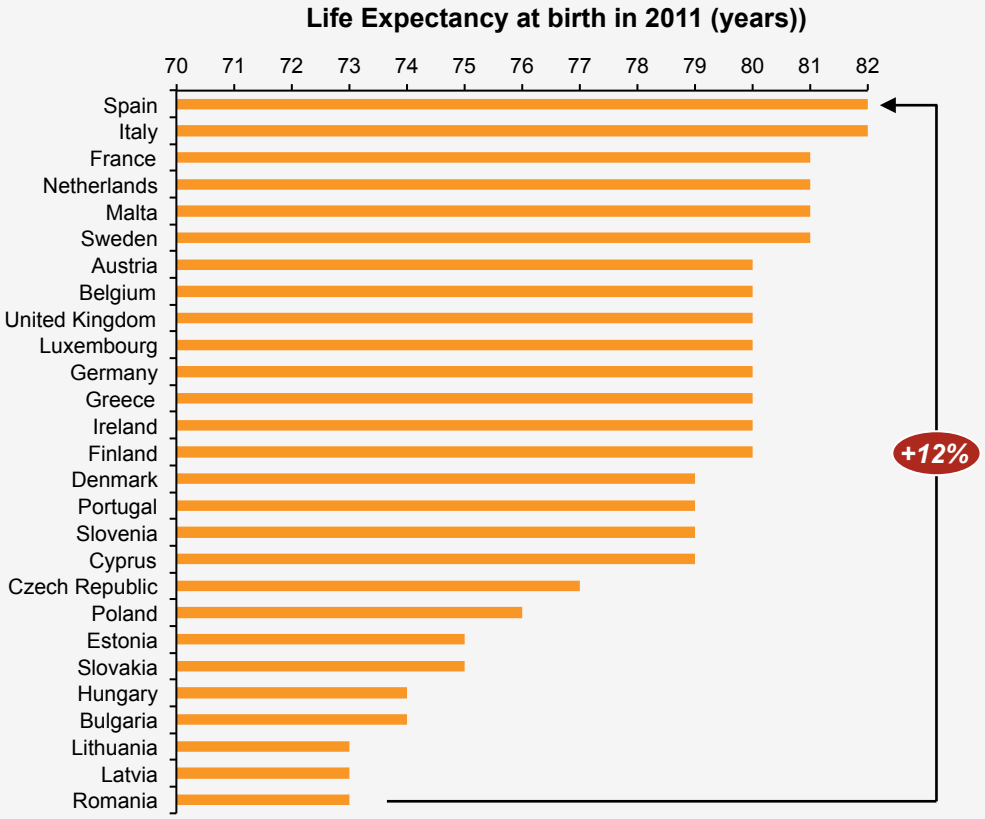


Multiple Sclerosis
Oral and biologic treatments approved over the past 15 years have dramatically improved outcomes for MS patients, slowing disability progression and offering fewer relapses.

Rheumatoid Arthritis
Therapeutic advances have transformed the RA treatment paradigm over the last 20 years, from focusing on symptom management to now aiming for slowed disease progression and even disease remission.

However wide variations in health attainments remain across Europe, amounting to almost a decade of life expectancy

Life expectancy at birth – 2011

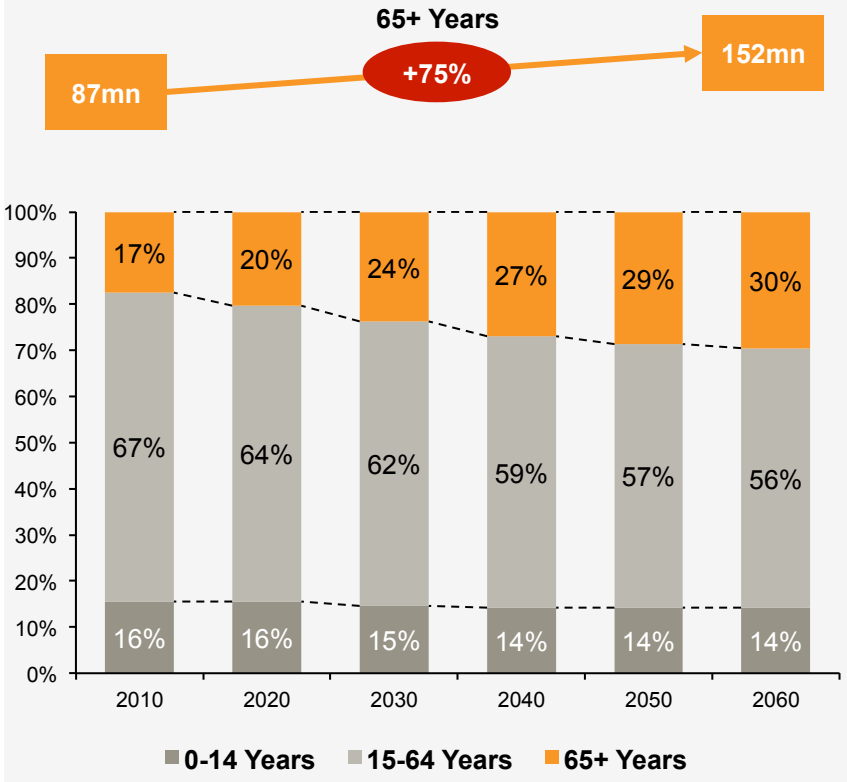


- While health outcomes have improved throughout Europe over the last 50 years, a 12% variation (equal to 9 years) in life expectancy exists between country with highest and lowest life expectancy.
- Cumulative differences in life expectancy between each country and highest life expectancy amounts to over 1.22 billion life years.
- While variations are most observable with recent accession markets, wide variations also exist in markets with highest life expectancy.

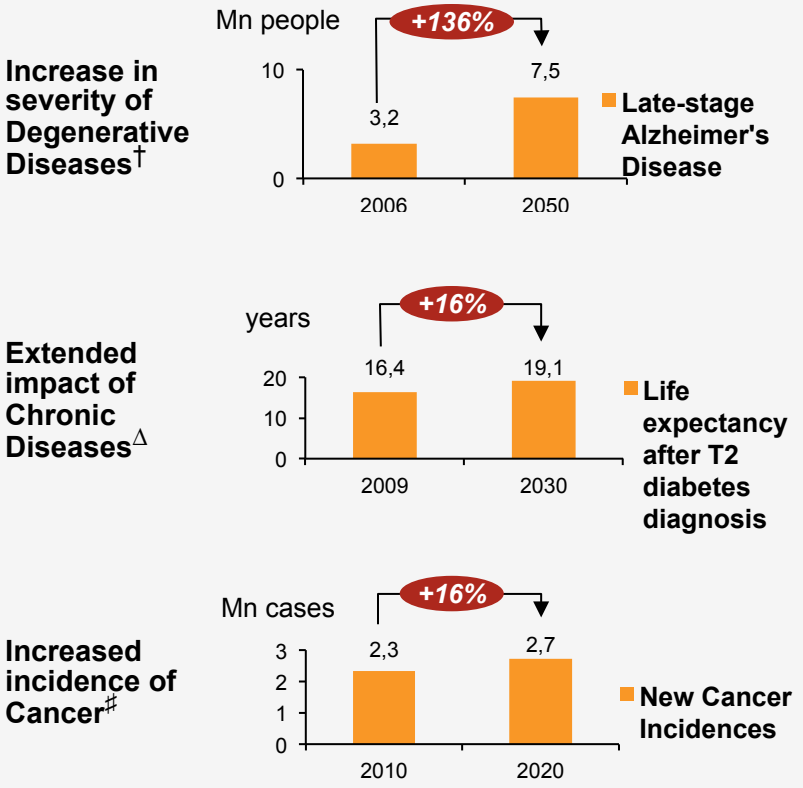
Source: World Health Organization (WHO): Database on life expectancy; The World Bank: Database on life expectancy at birth (both accessed 2013)

Looking to the future, Europe needs to find solutions to pressing demographic challenges that will impact health and social spending

Demographic Development*



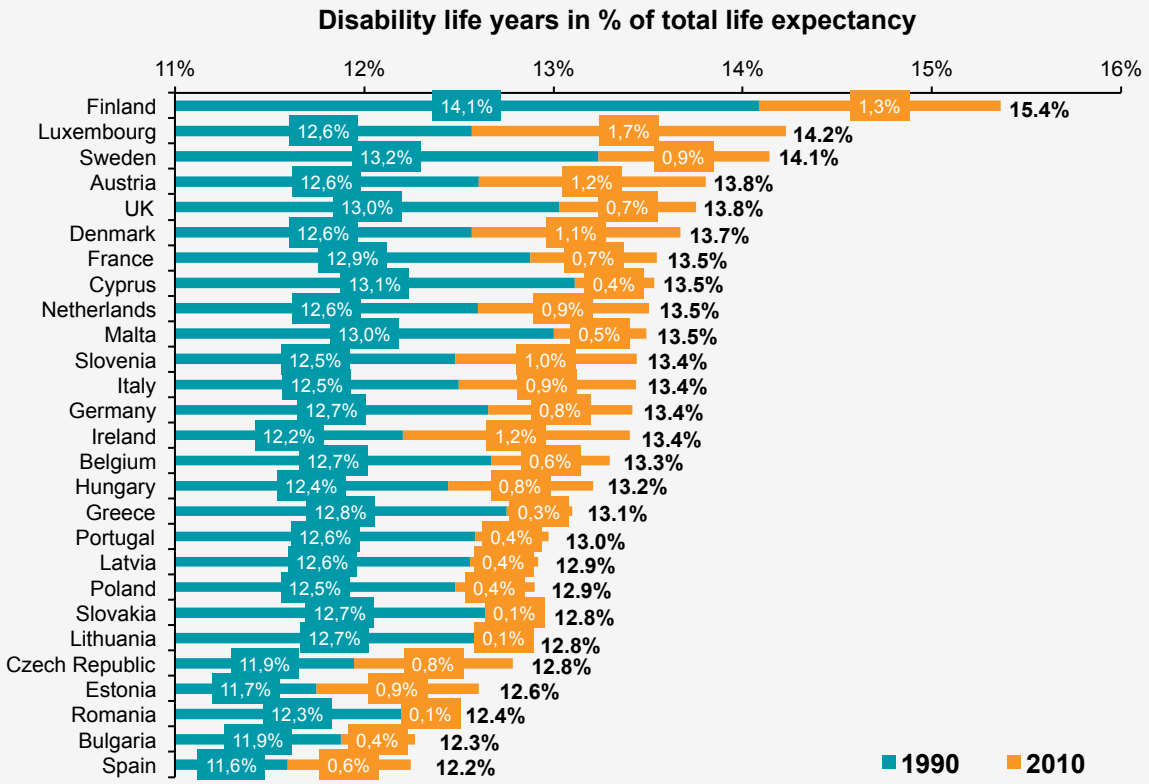
System Impact: Severity, length and increased incidence



Source: * European Commission (2012); † Brookmeyer R et al. (2007); △ UK Dept. of Health (2010), European Commission; ♯ WHO (2013)

With an ageing population living with disabilities focus needs to shift from preventing mortality to improving quality of life and function

Male Disability Life Years as a % of total life expectancy in 1990 and 2010

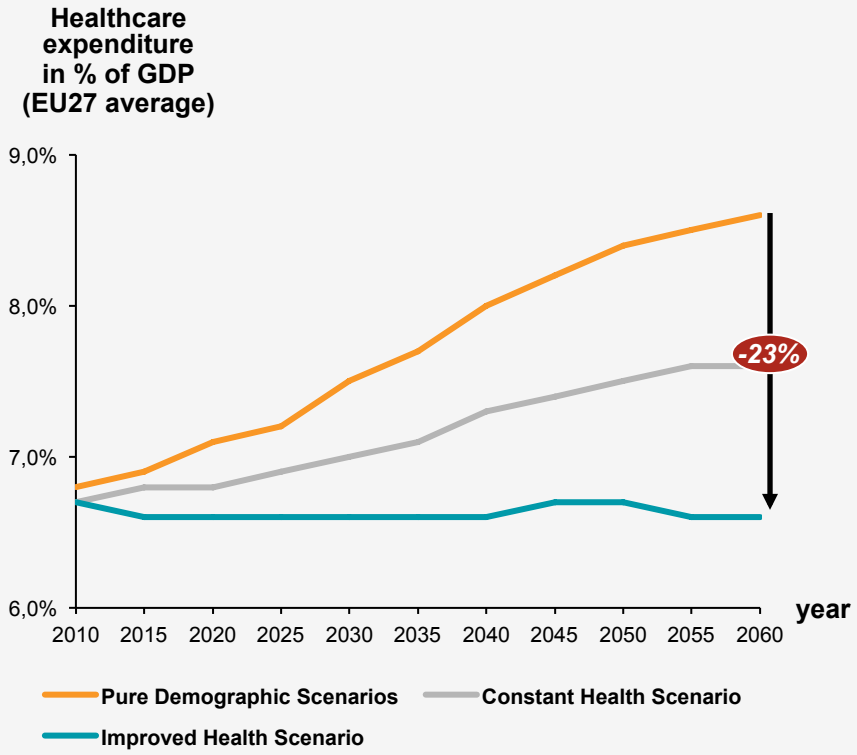


- In all 27 EU countries, disability life years as % of life expectancy has increased in the period 1990 – 2010.
- Going forward the old-age dependency ratio and the impact of chronic diseases on disability could result in additional increases going forward with productivity losses and increases in incapacity benefits as outcomes.

Source: Lancet: Healthy life expectancy for 187 countries, 1990–2010 (2010); A.T. Kearney analysis

Despite the bleak demographic picture, it remains possible to move healthcare spending to a more sustainable trajectory

Healthcare Expenditure (% of GDP, EU27 average) under different scenarios



- **Pure Demographic scenario:**

Gains in life expectancy are assumed to be spent in disabled health while the number of years spent in good health remains constant. In this, the assumption is that health care cost per capita for each year of age remains constant in GDP per capita-adjusted terms over the whole projection period.

- **Constant Health scenario:**

For each year and for each age/gender, the age-related expenditure profile is shifted outwards – i.e. providing modified values of cost per capita, which are then applied in the same manner as the pure demographic scenario. For the constant health scenario, the scale of the outward shift in the age-related expenditure profile is directly proportional to the increase in life expectancy for each cohort.

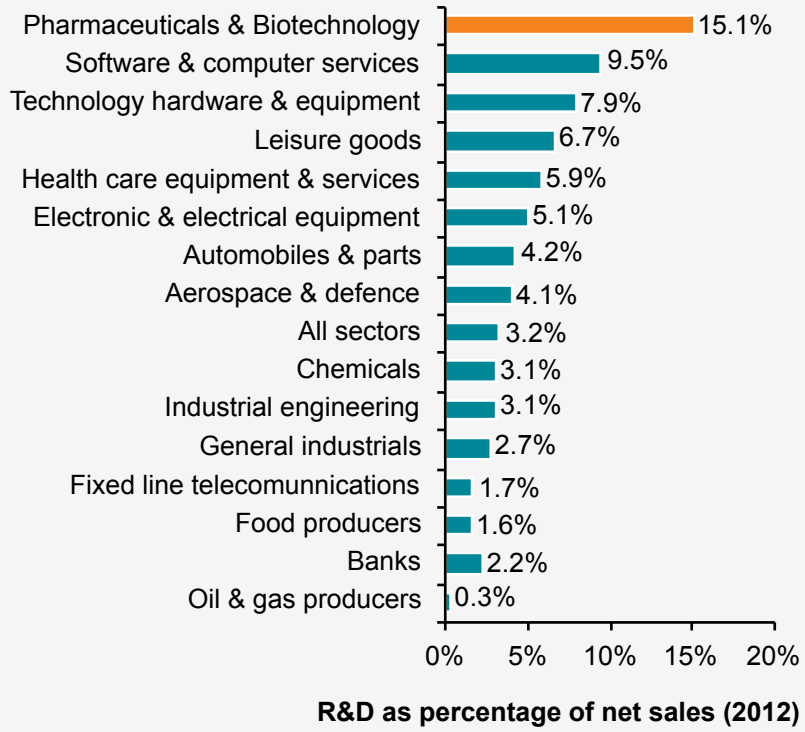
- **Improved Health scenario:**

Similar to the constant health scenario, only the same outward shift is assumed to be multiplied by a factor of 2.

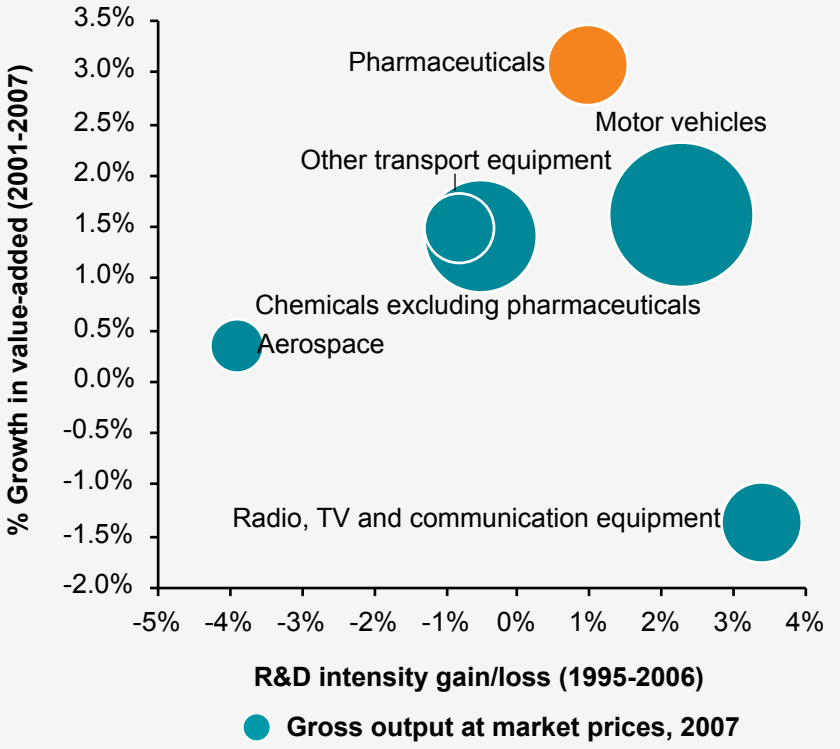
Source: European Commission: Projecting future healthcare expenditure at European level (2010)

Industry continues to invest significantly in R&D, driving one of the highest value added relative to other industries

Ranking of industrial sectors by overall R&D intensity*



Value added vs. changes in R&D intensity†

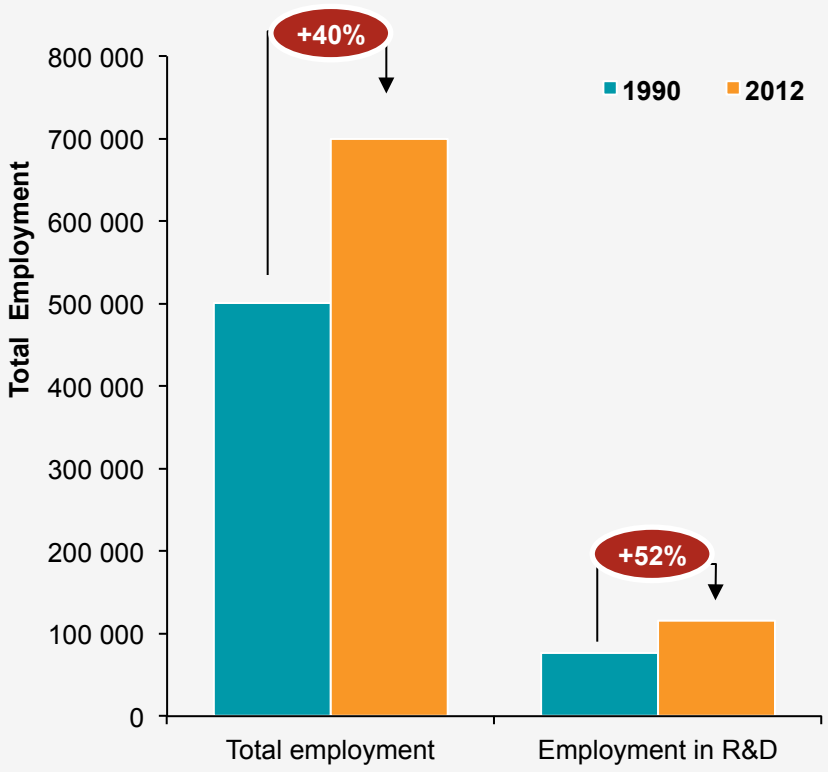


Note: R&D intensity gain/loss calculated as difference between average R&D intensity in 1995-2000 and 2001-2006

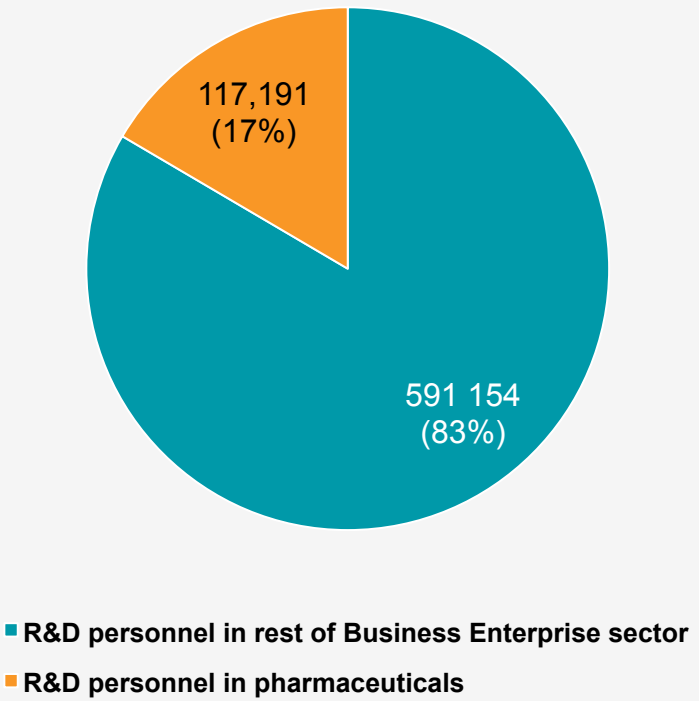
Source: * EFPIA: Pharmaceutical industry in figures (2013); † EU KLEMS Database; Eurostat; OECD STAN Indicators; European Commission: Innovation Union Competitiveness (2011)

The industry employs over 700 000 people in Europe, accounting for 17% of total business enterprise R&D employment

Employment in the pharmaceutical industry in EU (1990-2012)*



R&D jobs in pharmaceutical as a % of total R&D jobs across all business enterprises†

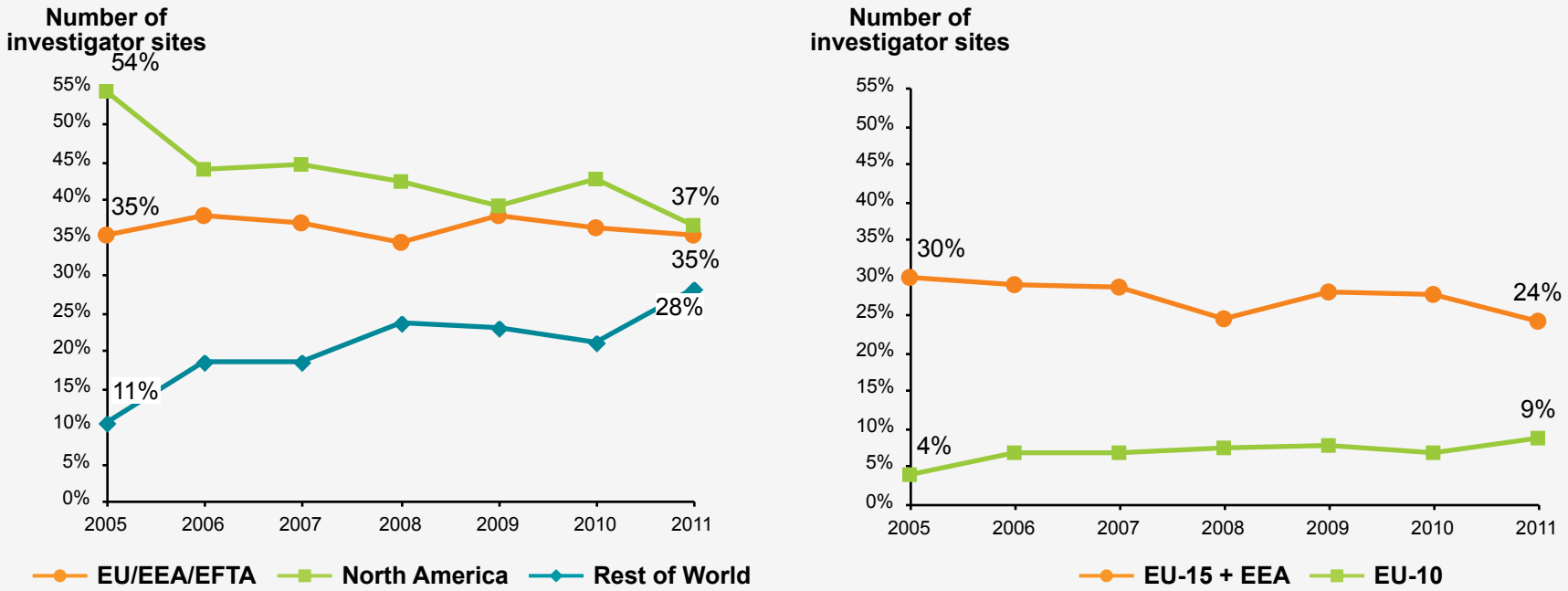


Source: * EFPIA: Pharmaceutical industry in figures (2013); † Eurostat - Science and Technology database (accessed March 2013)

While Europe has indeed maintained its share of clinical trials, this is largely down to positive developments in Eastern Europe

Investigator sites for clinical trials (2005-2011)

Number of investigator sites involved in pivotal clinical trials submitted in MAAs to the Agency per region and year



Note: EU-15 includes the member states of the European Union prior to the accession of the ten new countries on 1 May 2004, plus EEA countries.
EU-10 includes the 2004 accession countries

Source: EMA 2013, Clinical trials submitted in marketing-authorisation applications to EMA. Overview of patient recruitment and the geographical location of investigator sites

Integrating policy thinking on these three elements could result in win-wins

EFPIA Brussels Office

Leopold Plaza Building
Rue du Trône 108
B-1050 Brussels - Belgium
Tel: +32 (0)2 626 25 55

www.efpia.eu