

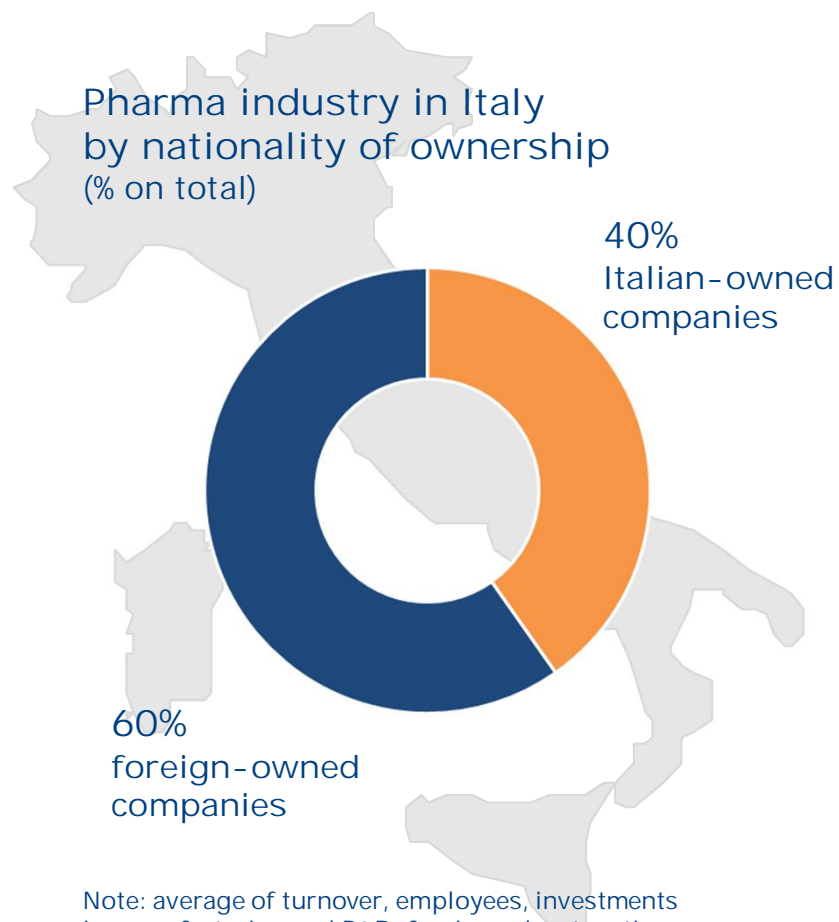
Facts&figures of the Pharmaceutical industry in Italy

July 2018



FARMINDUSTRIA

Key figures of the Pharma sector in Italy



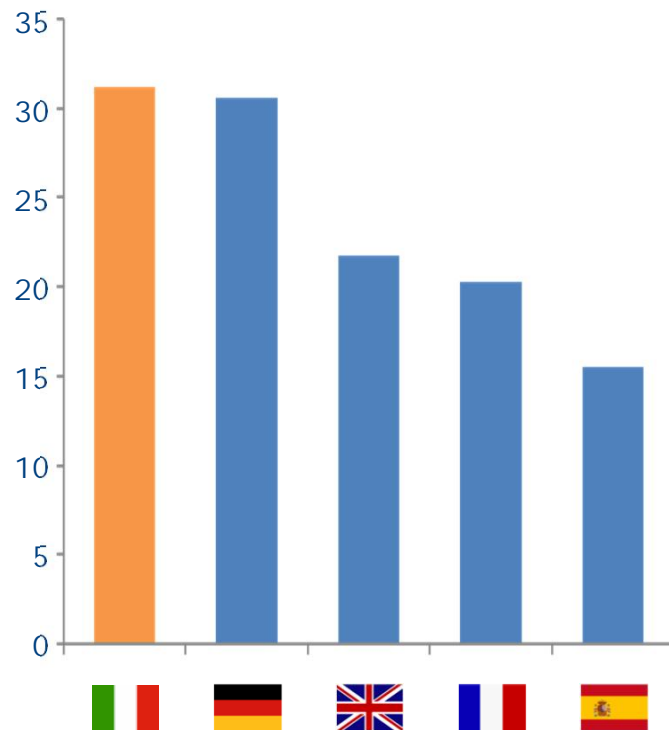
- 200 **companies**, members of Farmindustria, representing 90% of industrial value of the pharmaceutical sector in Italy
- 65,400 **employees** (90% graduates), 42% women, and 66,000 in **upstream sectors**
- 6,400 **R&D employees**, 52% women
- € 31 billion of **manufacturing value**, 79% of which due to export (€25 billion)
- € 2.8 billion in **investments**, €1.5 of which in R&D and €1.3 in hi-tech plants and machinery

Pharmaceutical and upstream sectors by Regions



Italy is the first pharma manufacturer in the EU

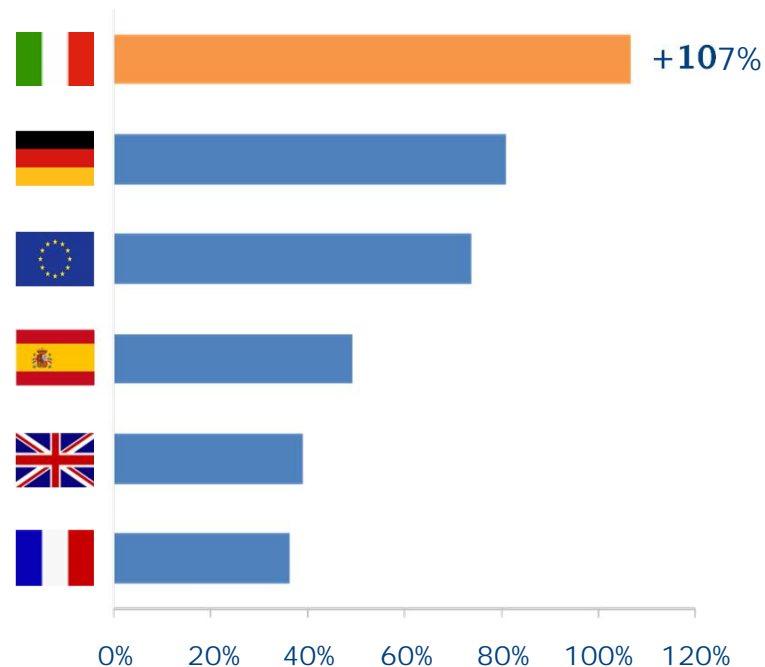
Pharmaceutical manufacturing
overall value (€ billion, 2017 estimates)



Italy is the **leading producer of pharmaceuticals in the European Union**. With € 31.2 billion the value of our production exceeds that of Germany and the other major EU countries

The largest growth of export in Europe: export as the engine of pharma companies in Italy

Pharma export: trend 2007-2017
for the big Eu countries
(% change)

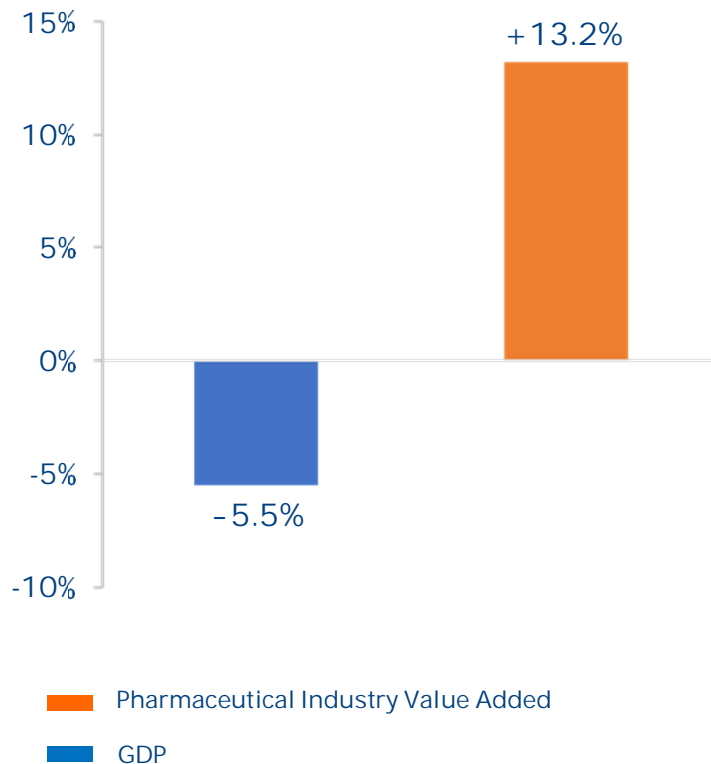


From 2007 to 2017 pharma export in Italy has grown **more than all big Eu countries and more than big European countries' average**

The performance of export is the result of an **increased quality of medicines and vaccines exported all over the world**: in 2010-2017 the average value of export registered a growth of +26% (compared to 1% of Big Ue average)

The role of the Pharmaceutical industry in Italy for the economy of the country

GDP and Pharma Industry Value Added, 2007-2017 % change



The comparison with GDP shows the importance of the pharmaceutical industry for Italy's economy

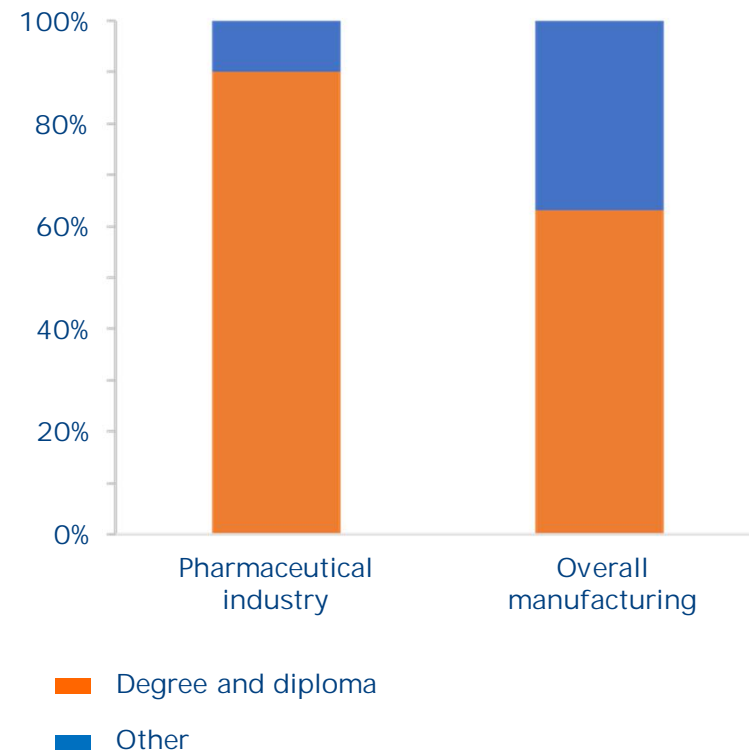
Furthermore, from 2007 to 2017 the pharma ranks first among manufacturing sectors for growth of:

- **industrial production** (+24%)
(manufacturing average: -18%)
- **export** (+107%)
(manufacturing average: +23%)
- **productivity*** (+40%)
(manufacturing average: +5%)

(*) labour productivity: added value per employee

Human Resources, the main competitive factor

Employment in the Pharma industry
in Italy by educational level
(% of total)



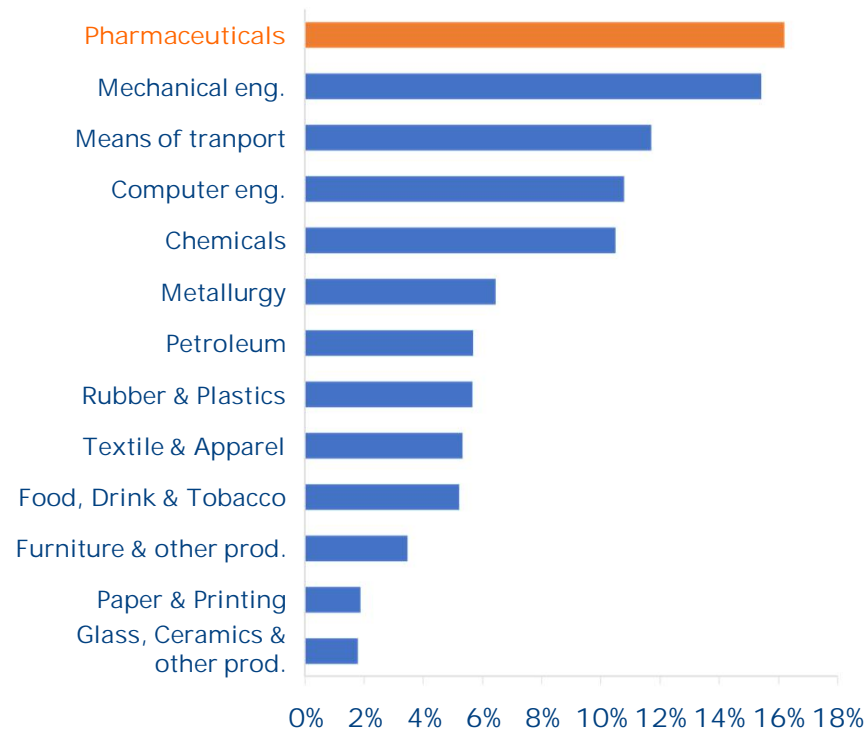
The **quality of Human Resources** is the main competitive advantage for pharma companies and their investments in Italy

In 2017 employment in pharma industry **grew by 1,6%**, mainly in production and R&D

6,000 new jobs in 2017

Foreign-owned pharma companies in Italy: leaders for investments and export

Investments and export of foreign-owned companies in Italy, per industrial sector (% of overall manufacturing)



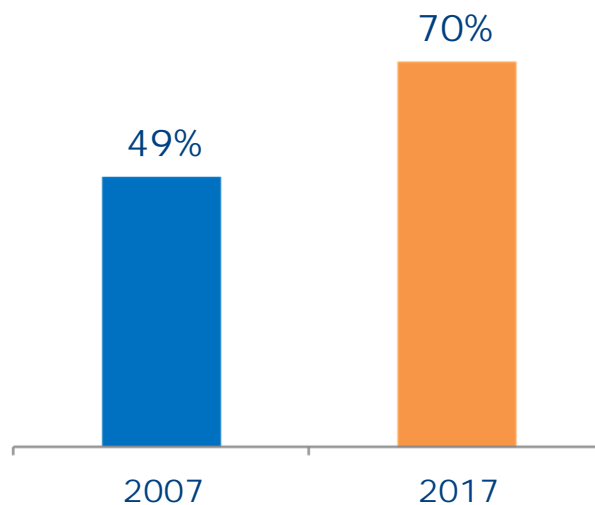
Among foreign-owned companies in Italy, pharma ranks top for **investments and export overall value**

And they are also leader for:

- share of export on production (90%)
- **added value per employees**

Italian-owned pharma companies in Italy: performances beyond the manufacturing average

Foreign sales of Pharmaceutical Italian-owned companies
(% of overall turnover)

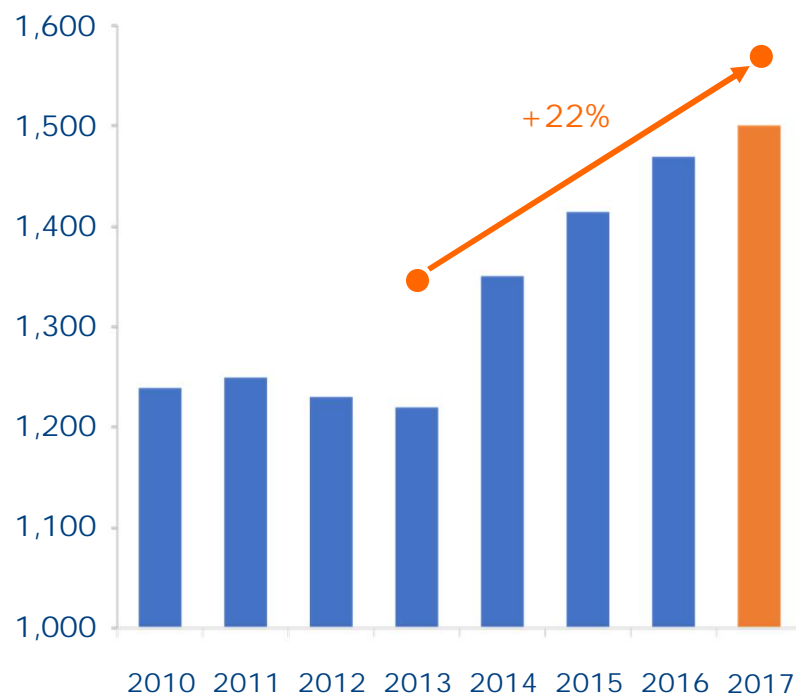


Among Italian-owned companies, pharmaceutical ones have **added value and investments in production and R&D per employee higher than the average**

This structural features allow companies to expand to foreign markets: in fact, **70% of total revenue** is generated by foreign sales

R&D pharma investment in Italy are growing

R&D pharma expenditure in Italy
(€ million)



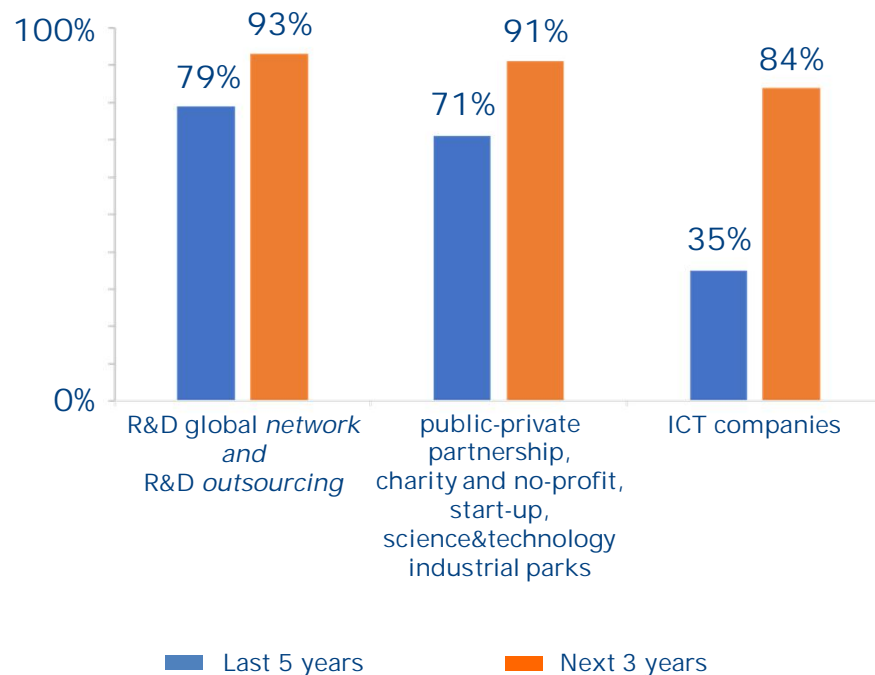
In 2017 pharma companies invested
€ 1,5 billion, 7% of national total

In the last five years investments
have grown by 22%
(+16% the European average)

Pharma companies in Italy invest 16% of
their added value. The sector drives the country
to **Europe 2020 goal**
(3% of national added value)

Pharma research in Italy: a network of excellence for health and quality of life

Share of pharmaceutical companies in Italy with R&D conducted in partnership (weighted data; weights: R&D investments)



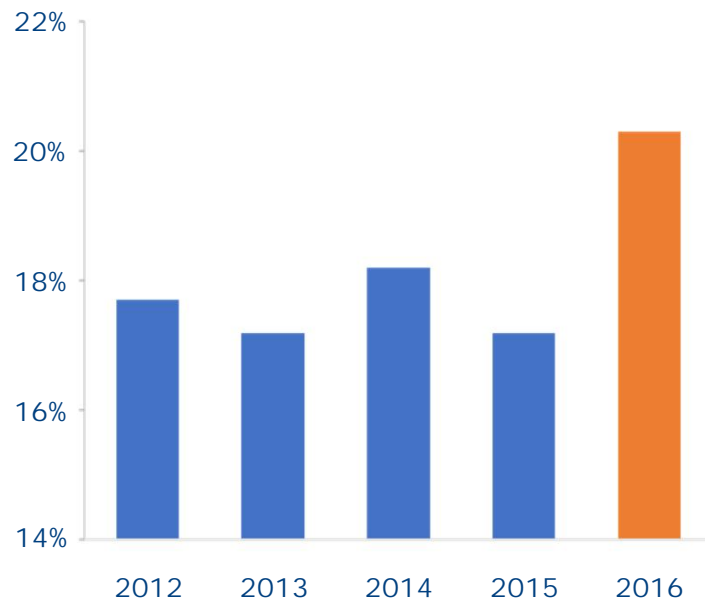
More than 7,000 medicines are being developed globally, **with the contribution of research in Italy: in biotech, vaccines, plasma protein therapies, advanced therapies, rare diseases and sex-difference medicine**

- 300 biotech products under development
- 3 out of 6 advanced therapy medicinal products are made in Italy

Innovation is the result of the network between companies and public-private partnership, non-profit, universities, biotech SMEs, start-up and no-profit companies

Clinical trials: the door of innovation, opportunity and resource for the country

Clinical trials: Italy's share on EU total (% on total)



In 2017 pharma companies invested **€ 700 million in clinical trials**, in NHS structures

Italy can become a **hub for clinical trials**, thanks to the scientific expertise and the excellences in industry, universities and NHS structures

Investing in clinical trials not only means **new medicines and innovative therapies for patients**: it also **guarantees to NHS important resources and savings**, since companies bear all the costs connected to clinical trials (for 1€ invested in oncology trials, NHS saves 2,2€)

Italy is among world's «healthiest» countries, with lower expenditure

Healthcare expenditure, % on GDP

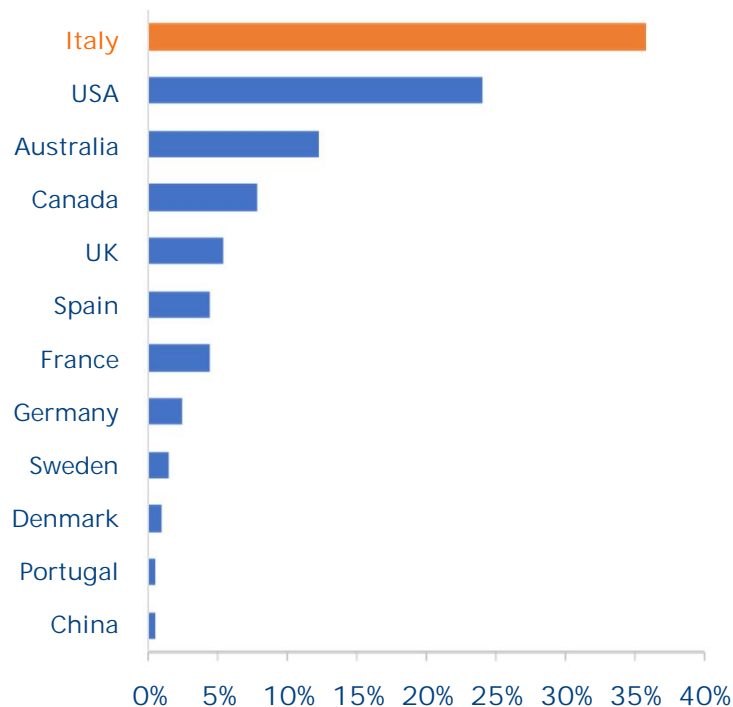
	Total	Public	Out-of-pocket
Eu-15 (ave.)	10.0	7.3	2.2
Italy	9.1	6.8	2.2
USA	16.9	8.4	8.6
Japan	11.2	9.5	1.7

The NHS is one of the most important assets in the country. Many respected international sources (WHO and OECD to name but a few) place Italy among countries at the top of the list in terms of life expectancy in good health and quality of the health service

Use of medicines and vaccines has made a major contribution to health in Italy and other countries, but in Italy the pharmaceutical spending is lower compared to other economies: over the last 10 years the expenditure/GDP ratio in Italy has been stable at 1%, compared to 1.2% average ratio in Europe

Italy is playing a leading role in outcome-based assessment schemes

% of MEAs of world total*



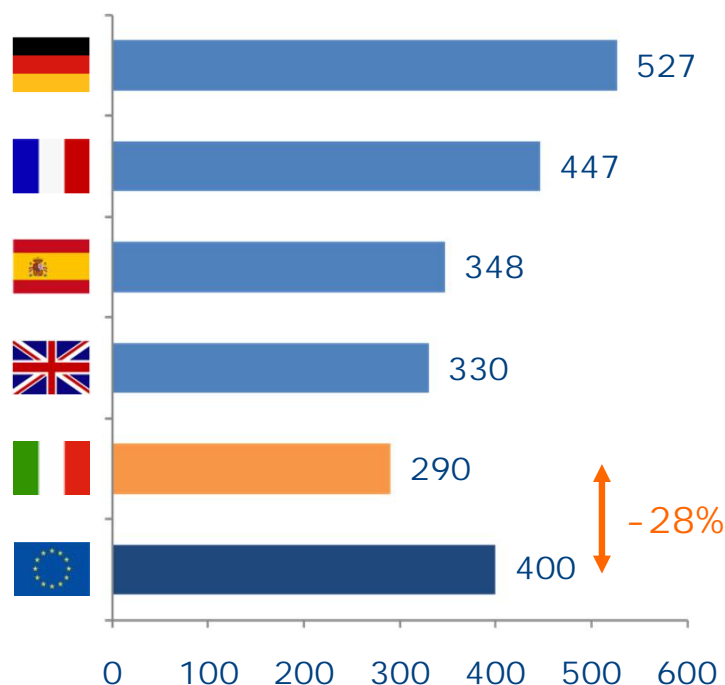
Italy is the world leading country for the number of innovative contracts between companies and the NHS (36% of the world's total)

Although still at an early stage in development, Italy decided to introduce MEAs, or Management Entry Agreements, following them up with **monitoring registers managed by AIFA** in order to guarantee their appropriateness and applicability. As a result of these agreements, pharmaceutical companies, between 2013 and 2017, **returned € 3.5 billion to the NHS**

*since 1994

Italy's pharmaceutical expenditure is lower than big European countries

Per capita pharma public expenditure
(territorial + hospital, euro, 2017)

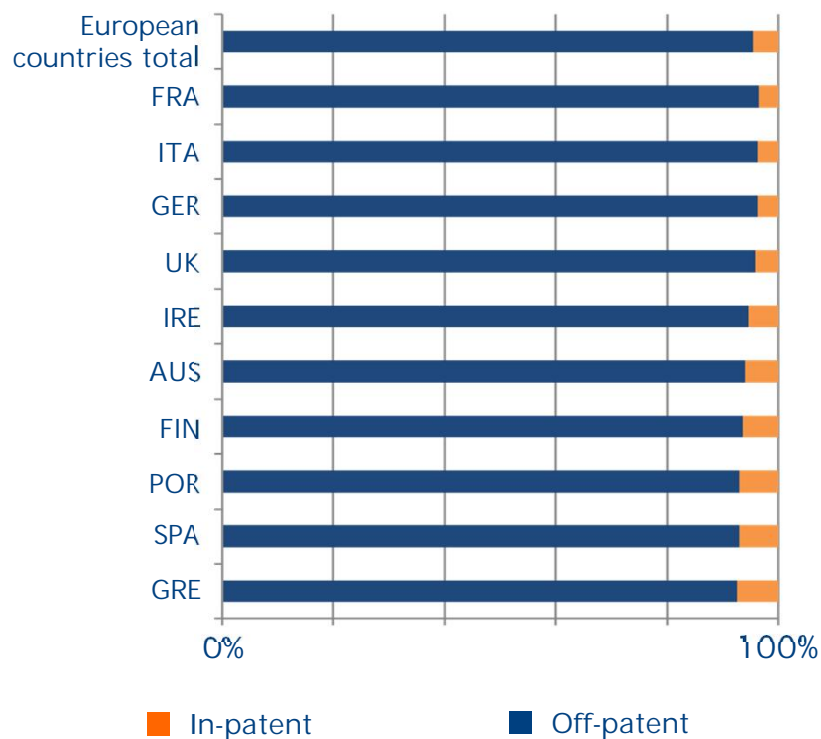


In Italy pharmaceutical public expenditure is 28% lower than European average: € 290 per capita compared to € 400

Our country is in line with other European countries in terms of diffusion of generics – 90% of pharmacy consumption is off-patent – and is the first for value and volume of sales for biosimilars, with the highest market share among the main European countries

Share of off-patent market in Italy is aligned with other European countries

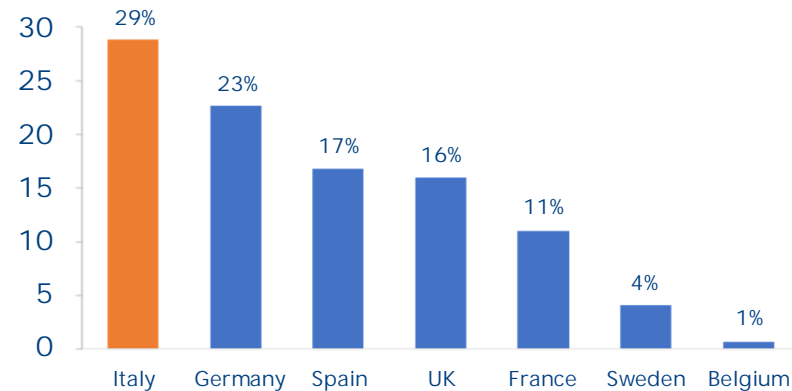
In and off-patent share in pharmacy market (% of total packages, 2017)



Italy is in line with other European countries in terms of diffusion of generics (90% of pharmacy consumption)

Italy is leader in EU for biosimilar consumption and market share on total

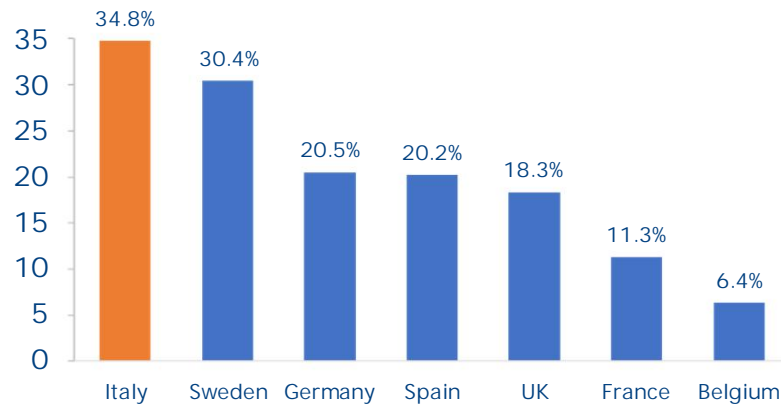
Biosimilar consumption in 2017
(% on total for Top7 EU countries, standard units)



According to 2017 data on biosimilar sales in top 7 EU countries (Italy, Germany, France, Spain, UK, Belgium, Sweden) Italy ranks:

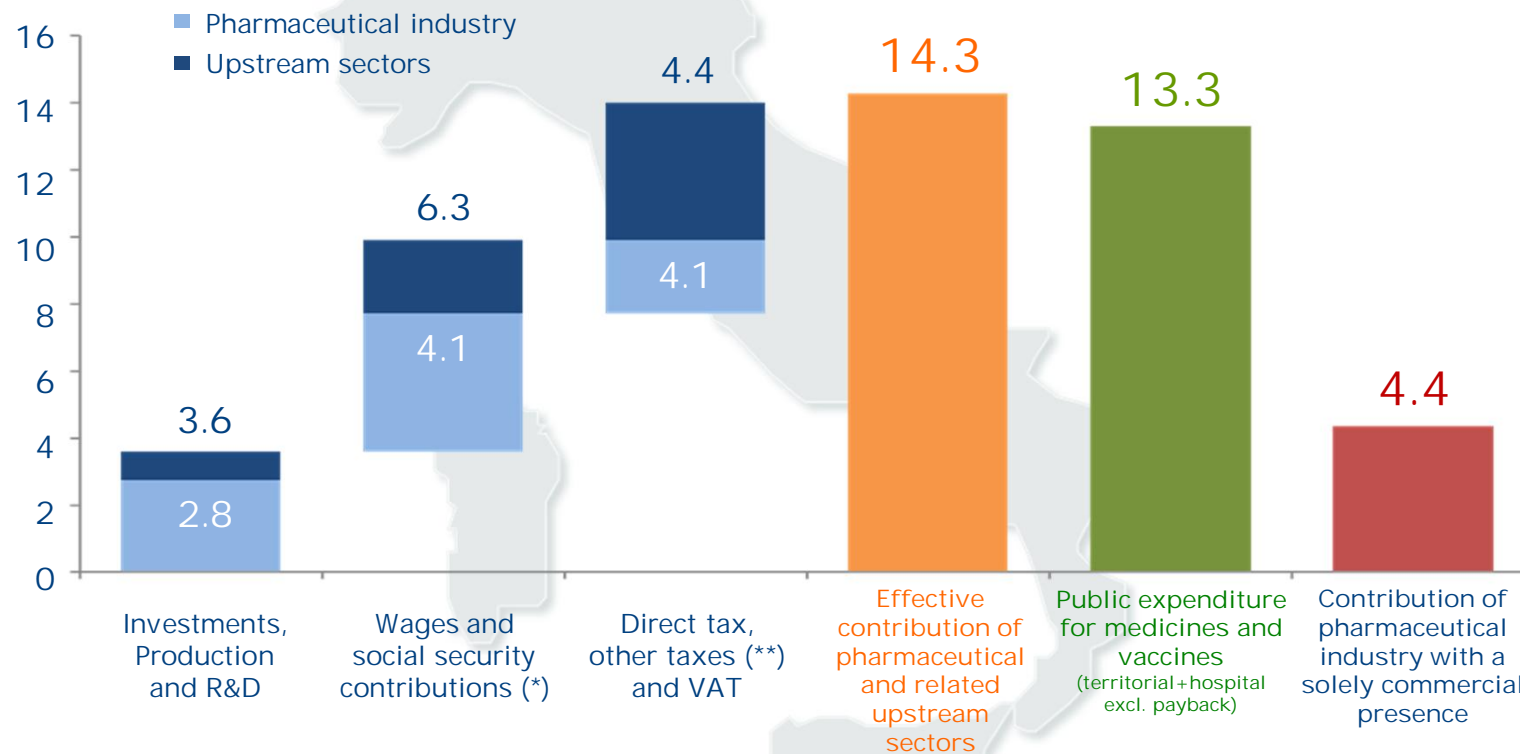
- 1st for consumption (29% of total)
- 1st for biosimilar market share on total (originator+biosimilar)

Volume market share on total EU Top7
(% of originator+biosimilar, standard units)



The Pharmaceutical industry and upstream sectors in Italy

Direct economic contribution of the Pharma industry and upstream activities, compared to public expenditure for reimbursed medicines – 2017
(€ billion, ex-factory prices)



(*) excluding R&D employees, included in «R&D investments»

(**) fares, duties and non-deductible calculated on expenditure in promotional events and conventions