Facts & figures
of the Pharmaceutical industry in Italy

July 2018
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

Note: average of turnover, employees, investments in manufacturing and R&D, foreign sales, taxation

Source: elaboration of Istat, Eurostat data
Pharmaceutical and upstream sectors by Regions

Lombardy
28,400 direct employees, 17,600 employees in upstream industries; Lombardia ranks 1st in Europe amongst pharmaceutical regions

Piedmont and Liguria
2,000 direct employees and 7,300 in upstream industries

Tuscany
7,000 direct employees, 4,300 employees in upstream industries; Tuscany is in the top-ten of hi-tech clusters in Italy

Emilia Romagna
3,700 direct employees and 6,800 in upstream suppliers; with excellence in upstream industries

Veneto
3,000 employees, 7,200 in upstream industries; 31% of regional hi-tech export

Marche
2,900 employees in pharma companies and upstream suppliers

Abruzzo
1,400 direct employees (100 in R&D) and 1,300 in allied industry

Campania
900 direct employees and 3,000 in upstream industries

Puglia
Centres of excellence of major international companies (3,000 employees in pharma companies and related industries)

Sicily
About 1,000 direct employees and 2,500 in related industries

Fact & figures of the Pharmaceutical industry and upstream sectors in Italy
- 132,000 employees
- 6.7 € bln of salaries (including social contributions)
- 45 € bln of production value
- 3.6 € bln of R&D, plants and machinery investments

Source: elaboration of Farmindustria, Istat data
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

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).

Source: elaboration of Istat, Eurostat data
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

Source: elaboration of Istat data
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.

Fonte: elaboration of Istat, Farmindustria data
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

Source: elaboration of Istat data
Italian-owned pharma companies in Italy: performances beyond the manufacturing average

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.

Source: elaboration of Istat, Famindustria data
R&D pharma investment in Italy are growing

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)

Source: elaboration of Farmindustria, Istat, Bain&Company data
Pharma research in Italy: a network of excellence for health and quality of life

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

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

<table>
<thead>
<tr>
<th>Category</th>
<th>Last 5 years</th>
<th>Next 3 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;D global network and R&amp;D outsourcing</td>
<td>79%</td>
<td>93%</td>
</tr>
<tr>
<td>Public-private partnership, charity and no-profit, start-up, science &amp; technology industrial parks</td>
<td>71%</td>
<td>91%</td>
</tr>
<tr>
<td>ICT companies</td>
<td>35%</td>
<td>84%</td>
</tr>
</tbody>
</table>

Source: elaboration of Istat data
Clinical trials: the door of innovation, opportunity and resource for the country

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€)

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

Source: Aifa data
Italy is among world’s «healthiest» countries, with lower expenditure

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.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Public</th>
<th>Out-of-pocket</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eu-15 (ave.)</td>
<td>10.0</td>
<td>7.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Italy</td>
<td>9.1</td>
<td>6.8</td>
<td>2.2</td>
</tr>
<tr>
<td>USA</td>
<td>16.9</td>
<td>8.4</td>
<td>8.6</td>
</tr>
<tr>
<td>Japan</td>
<td>11.2</td>
<td>9.5</td>
<td>1.7</td>
</tr>
</tbody>
</table>

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

It 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)

- Germany: €527
- France: €447
- Spain: €348
- United Kingdom: €330
- Italy: €290
- European average: €400

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.

Source: elaboration of Aifa, Cergas-Bocconi, IQVIA, Eurostat
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

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)
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)

<table>
<thead>
<tr>
<th>Category</th>
<th>Pharmaceutical industry</th>
<th>Upstream sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investments, Production and R&amp;D</td>
<td>3.6</td>
<td>2.8</td>
</tr>
<tr>
<td>Wages and social security contributions (*)</td>
<td>4.1</td>
<td>4.1</td>
</tr>
<tr>
<td>Direct tax, other taxes (**) and VAT</td>
<td>6.3</td>
<td>6.3</td>
</tr>
<tr>
<td>Effective contribution of pharmaceutical and related upstream sectors</td>
<td>14.3</td>
<td>13.3</td>
</tr>
<tr>
<td>Public expenditure for medicines and vaccines (territorial+hospital excl. payback)</td>
<td>4.4</td>
<td></td>
</tr>
<tr>
<td>Contribution of pharmaceutical industry with a solely commercial presence</td>
<td>4.4</td>
<td></td>
</tr>
</tbody>
</table>

(*) excluding R&D employees, included in «R&D investments»
(***) fares, duties and non-deductible calculated on expenditure in promotional events and conventions

Source: elaboration and estimates of Aifa, Farmindustria, Istat data