Strategic Autonomy and the Competitiveness of Europe’s Pharmaceutical sector

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Outline

- Europe’s pharmaceutical strengths
- Competitiveness: what is it and how the EU measures it
- Competitiveness of Europe’s pharmaceutical sector
  - Research and Development
  - Other dimensions related to R&D
- Policy recommendations
- Questions and (hopefully) Answers

Shaping Europe’s international economic policy
Europe’s pharmaceutical strengths

EU global leader in trade in pharmaceuticals.

EU RCA 1.9 (US, 1.1; China, 0.38).

China is still below the EU and US but growing strong.
Competitiveness (ambiguous concept) is built on two foundations:

Growing productivity in the economy (firms)

How economies (firms) perform in an international context – or vis-à-vis other economies (firms) in other regions. Usually exports.

∑ firms competitiveness in a country = competitiveness of a country
Competitiveness of Europe’s pharmaceutical sector

- Innovation (R&D) is the most powerful engine for the competitiveness in the pharmaceutical industry
- The EU has considerable advantages (democratic market economy, rule-of-law, protection of IP, science-based education, good universities, strong medicines regulatory agencies)
- But Europe is far from the only region with such characteristics.
Competitiveness of Europe’s pharmaceutical sector

- R&D
- Innovation input
- Innovation output
Research & Development

**Figure 1:** Market Shares in Biopharmaceutical R&D Investments

Source: Charles River Associates (2020)

**Figure 3:** Pharmaceutical Companies’ R&D Expenditure Across Countries (2001-2020)

Source: Charles River Associates (2020)
The share of European-headquartered emerging biopharma companies has been declining over the last ten years, with the US dominating and China growing rapidly. Weaker performance today will dampen future R&D spending since most companies tend to invest in the regions where they already have R&D or manufacturing sites.

![Figure 6: Location of Advanced Therapy Medicinal Products (ATMP) Clinical Trials (2014-2021)](image)

Innovation input and output

**Figure 4:** Number of new chemical and biological entities (2002-2021)

- 2002-2006: Europe = 46, U.S. = 67, Japan = 21, Others = 14
- 2007-2011: Europe = 52, U.S. = 65, Japan = 12, Others = 20
- 2012-2016: Europe = 75, U.S. = 88, Japan = 12, Others = 20
- 2017-2021: Europe = 72, U.S. = 41, Japan = 12, Others = 71

**Figure 5:** Share of pipeline phase I to regulatory submission based on company headquarters (2007-2022)

- 2007: Europe = 40%, U.S. = 31%, China = 11%, Others = 2%
- 2012: Europe = 42%, U.S. = 30%, China = 12%, Others = 4%
- 2017: Europe = 44%, U.S. = 27%, China = 10%, Others = 6%
- 2022: Europe = 44%, U.S. = 23%, China = 15%, Others = 6%

Source: EFPIA (2022); The Pharmaceutical Industry in Figures.

Source: IQVIA Pipeline Intelligence (2022).
Policy recommendations

1. Learn from the positive US performance
2. EU Strategic Autonomy too focus on manufacturing
3. Competitiveness and Strategic Autonomy go hand-in-hand
4. More funding and better incentives to increase R&D
Policy recommendations

1. Learn from the positive US performance
   - Forces of relative economic decline do not have to lead to falling competitiveness in a prioritised sector.
   - US's main advantages:
     - World class innovation hubs
     - World class academic institutions
     - Funding concentrated on leading clusters (Massachusetts, Maryland and the District of Columbia getting the larger amount of funding from the US National Institute of Health)
2. EU Strategic Autonomy too focus on manufacturing

- Since COVID-19, EU policymakers pushed to think about manufacturing resilience – not innovation and growth.

- To the extent that there is an industrial policy ambition for the pharmaceutical sector, it seems to build on the idea of growing manufacturing.

- While important, a single-minded focus on the manufacturing of medicines could lead to reallocating resources towards low value-added production.

- Industrial policy is about getting towards a production mix of higher-productivity activities.
3. Competitiveness and Strategic Autonomy go hand-in-hand

- Strategic Autonomy («act autonomously whenever we must») is about being a leading region in innovation and operating at the frontier of technological change.

- The economic strength of Europe’s pharmaceutical sector is about its capacity to develop the medicines and treatments of tomorrow.
4. More funding and better incentives to increase R&D
   • ↑ EU public R&D in the pharmaceutical sector
   • ↑ EU private R&D in the pharmaceutical sector
     • Incentives for private R&D investment (duration patent protection; remain attractive for Advanced Therapy Medicinal Products, IP in Free Trade Agreements).
Many thanks for your time and happy to answer your questions now or by email.

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