



# MEASURING THE ECONOMIC FOOTPRINT OF THE BIOTECHNOLOGY INDUSTRY IN THE EUROPEAN UNION

EuropaBio - WifOR Institute



## EXECUTIVE SUMMARY

'Measuring the Economic Footprint of the Biotechnology in the European Union' estimates the contribution of the biotechnology industry to the EU economy and labour market in terms of gross value added, productivity, employment and trade within 27 European Member States.

Direct, indirect, and induced effects generated by the biotechnology industry in the EU27 between 2008-2022 are quantified in accordance with the system of national accounts and using a multiregional input-output model.

This economic footprint analysis provides an overall economic snapshot of the EU biotechnology industry, supplemented by trade and R&D figures. It sheds light on the performance of the industry, its direct contribution to the EU's GDP and labour market, as well as on the spillover effects into EU supply chains.

The study does not measure the substantial economic activity linked to those companies that may be pre-revenue or providing biotechnology services. It does however capture the value of many of the products that are consumed by this community during its operation, indicating the substantial innovation engine that underpins economic outputs delivered later in the value chain.

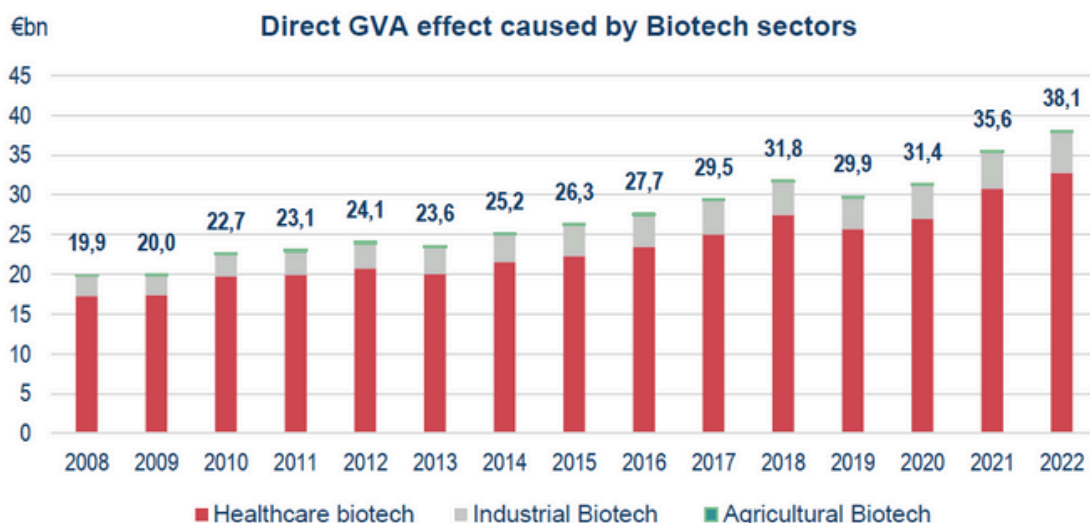
This study was commissioned by EuropaBio, the European Association of Bioindustries, with the objective to better quantify the impact of the biotechnology industry on the European Union's economy.

For more information, contact [communications@europabio.org](mailto:communications@europabio.org) or [c.skentelbery@europabio.org](mailto:c.skentelbery@europabio.org).

## ECONOMIC INDICATORS

### GROSS VALUE ADDED

Gross value added (GVA) from biotechnology activities was €38.1 billion in 2022, almost doubling since 2008. Whilst healthcare biotechnology remains the dominant contributor, reflecting the maturity of the sector, industrial biotechnology is the fastest growing subsector in terms of GVA, with a growth rate of 5.3% – over double that of the EU total economy.

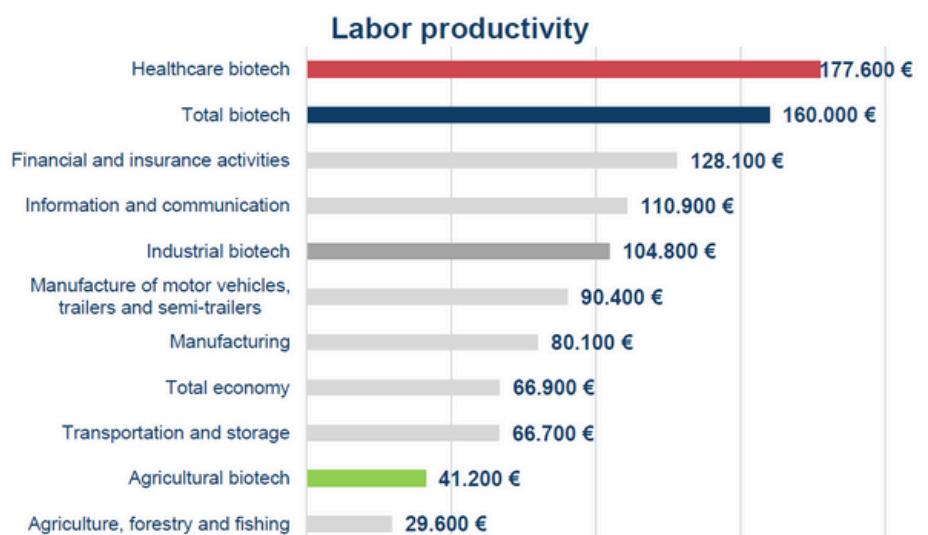


GVA time series for the EU biotechnology industry (EU27, current prices). Source: Eurostat: Prodcom database; WifOR analysis.

### PRODUCTIVITY

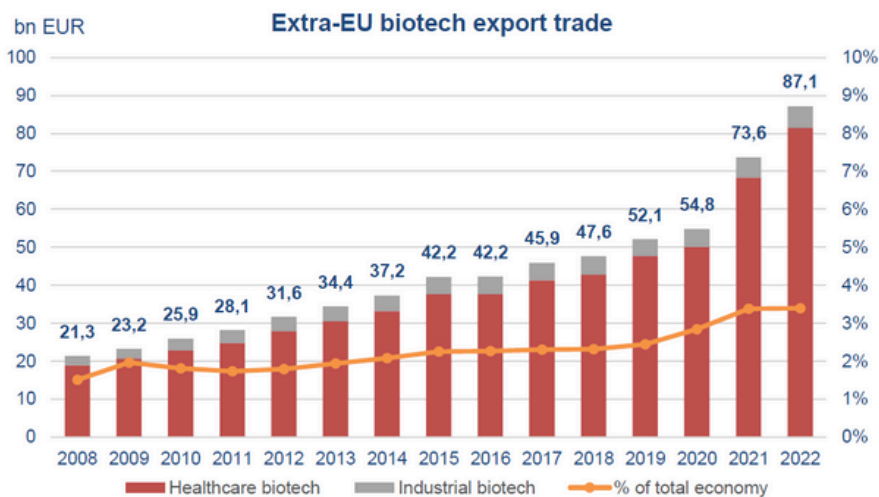
Biotechnology is one of the most economically productive industries. Across all sectors, it generates €160,000 GVA per person employed, with healthcare biotechnology leading the way at €177,600. This is 2.85 times higher than the EU economy's average and exceeds sectors such as finance, ICT and automotive.

Labor productivity in the EU27, 2022, GVA per person employed. Source: Eurostat: Prodcom database, NAMA 64a, NAMA 64e; WifOR analysis.



## TRADE AND EXPORTS

Biotechnology outputs deliver a significant trade surplus for the EU with its global trading partners, at a value of €51.7 billion in 2022, a sevenfold increase since 2008. The economic value of healthcare biotechnology exports rose significantly in 2021 and 2022 (up 35% since 2020), indicative of the European Union’s role in COVID-19 pandemic response, whilst exports across all biotechnology sectors have grown consistently each year since 2008.

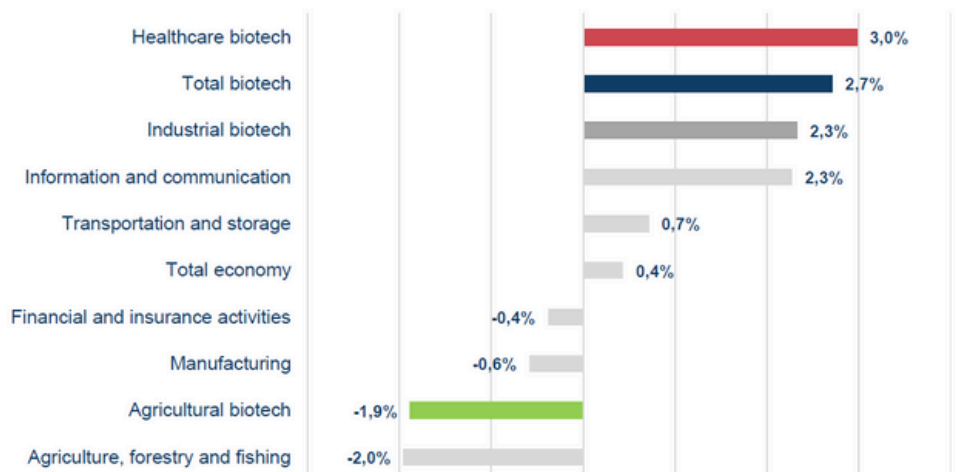


*Extra-EU27 exports of the biotechnology industry. Source: Eurostat: Prodcom database; WifOR analysis.*

## EMPLOYMENT

Employment growth through biotechnology is six times higher than the overall EU economy, with industrial biotechnology developing the fastest – growing over 7.5 times the EU average, with a steep increase over the years 2019 – 2022. The spillover effect is also significant, as each job in industrial biotechnology generates 3.4 additional jobs in the broader economy.

Employment compound average growth rate



*Employment compound average growth rate, 2008-2022. Source: Eurostat: Prodcom database, NAMA64e; WifOR analysis.*