Growth Sector Briefing - Life Sciences

Office of the Chief Economic Adviser

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# Growth Sector Definition

Life Sciences was identified in Scotland’s Economic Strategy (2015) as one of the growth sectors in which Scotland can build on existing comparative advantage and increase productivity and growth. The term Life Sciences reflects a wide range of activity including the discovery, research, development and manufacture of therapeutics; diagnostics; medical devices and platform technologies as well as the specialist suppliers of products and services necessary for these organisations to function. As such it is not possible to specifically define the industry in terms of SIC codes. However, a set of SIC codes (outlined below) can be used to track changes in part of the Scottish Life Sciences growth sector over time.

The Life Sciences growth sector is defined by the Standard Industrial Classification (SIC) 2007 codes:

SIC 21: Manufacture of basic pharmaceutical products and pharmaceutical preparations

SIC 26.6: Manufacture of irradiation, electromedical and electrotherapeutic equipment

SIC 32.5: Manufacture of medical and dental instruments and supplies

SIC 72.11: Research and experimental development on biotechnology

SIC 72.19: Other research and experimental development on natural sciences and engineering

An alternative source for measuring the economic activity of the Life Sciences sector can be derived from a Scottish Enterprise maintained database of businesses involved in Life Sciences activities in Scotland – including animal health, human health, agricultural and marine biotechnology. This [database](https://www2.gov.scot/Topics/Statistics/Browse/Business/Publications/GrowthSectors/LifeSciencesSourcebook) encompasses the wider range of life science businesses and includes professional service businesses that support the Life Sciences sector e.g. legal services. This broad approach to defining Life Sciences is therefore based on the businesses identified directly to be part of the life sciences sector or, in some cases, businesses which provide services to the sector through its supply chain, however, some of the companies in the wider supply chain may also provide services to other sectors. Scottish Enterprise supplies the Scottish Government with its Life Sciences database each year so that estimates of turnover and GVA can be sourced by matching the Life Sciences database with financial and employment data from the Annual Business Survey.

This briefing will provide data from both of these sources, where appropriate.

# Key Statistics

## Recent trends in GDP (2023 Q4)

*Updated March 2024, next update June 2024*

The latest GDP data[[1]](#footnote-1) show that output in the Life Sciences growth sector increased by 0.5% in the most recent quarter, whereas output across the economy as a whole decreased by 0.6%. Compared with the same quarter in the previous year, output in this sector decreased by 5.8%, with output across the economy as a whole decreasing by 0.3%, comparing Q4 2023 to Q4 2022.

## Employment (2022)

*Updated November 2023, next update November 2024*

Employment in the Life Sciences growth sector stood at 23,000 in 2022, accounting for 0.9% of employment in Scotland and 9.0% of employment in Life Sciences across Great Britain. Employment in this sector increased by 27.8% over the latest year in Scotland.

## Employment (2021) - Life Sciences Cluster

*Updated March 2024, next update March 2025*

The wider Life Sciences sector employs 44,200 people in businesses and Higher Education Institutions.[[2]](#footnote-2)

## Employment across Scotland (2022)

*Updated November 2023, next update November 2024*

In 2022, employment in the Life Sciences growth sector was highest in City of Edinburgh (3,000) and Glasgow City (2,500), which comprised 13.0% and 10.9% of employment in this sector respectively.

## Exports[[3]](#footnote-3) (2021)

*Updated March 2024, next update tbc*

Total exports from the Life Sciences growth sector stood at £2.6 billion in 2021, accounting for 3.2% of Scotland’s total exports. Exports from this sector increased by 35.5% over the year.

Exports to the rest of the UK stood at £395 million in 2021 and accounted for 15.5% of total Life Sciences exports. International exports to the EU stood at £1,025 million (40.1%) and international exports to non-EU countries stood at £1,140 million (44.6%).

**Exports (2021) – Life Sciences Cluster**

*Updated March 2024, next update tbc*

International exports from the wider Life Sciences cluster stood at £4.3 billion in 2021, up 14.9% on 2020.

**Turnover/Gross Value Added (2021)**

*Updated August 2023, next update August 2024*

In 2021, total turnover in the Life Sciences growth sector was £4,060.2 million. Between 2020 and 2021, total turnover in this growth sector increased by 26.2% in nominal terms.

Gross Value Added for the Life Sciences growth sector was estimated at £2,223.7 million in 2021, an increase of 26.9% compared to 2020 (£1,716 million).

## Turnover/Gross Value Added (2021) - Life Sciences Cluster

*Updated March 2024, next update March 2025*

Total turnover for businesses in the wider Life Sciences cluster was estimated at £10.5 billion in 2021. Total turnover increased by 19.2% between 2020 and 2021. Gross Value Added for businesses in this wider cluster was estimated at 4.6 billion in 2021 and increased by 12.7% from the previous year.

## Enterprises (2023)[[4]](#footnote-4)

*Updated December 2023, next update December 2024*

In March 2023, there were 590 registered enterprises operating in the Life Sciences growth sector, representing 0.3% of all registered business in Scotland. In 2023, 86.4% of Scottish Life Sciences registered enterprises were small (0-49 employees), accounting for 17.9% of employment in this sector, whilst large enterprises (250+ employees) accounted for 5.9% of registered enterprises but 60.2% of employment.

The majority of enterprises in the Life Sciences sector were UK owned with their registered office address in Scotland (84.7%), accounting for 30.4% of sector employment in 2023. 11.0% of businesses were registered abroad, but they accounted for 58.6% of employment in this sector.

## Enterprises (2021) - Life Sciences Cluster

*Updated March 2024, next update March 2025*

In 2021, the wider Life Sciences sector comprised of 725 enterprises.

## Earnings (2023)

*Updated December 2023, next update December 2024*

Median weekly full time earnings across the Scottish Life Sciences growth sector stood at £724.0 in 2023, which was higher than the Scottish average at £702.8.

## Business Demography (2022)

*Updated March 2024, next update March 2025*

The number of registered business births (VAT/PAYE registrations) in the Life Sciences growth sector in Scotland decreased by 30.0%, from 50 in 2021 to 35 in 2022. The business birth rate, which is the number of births as a percentage of active businesses, was 5.8%. In comparison, business births in Life Sciences across the UK decreased by 28.7% between 2021 and 2022, with a birth rate of 7.7%.

The number of business deaths (VAT/PAYE de-registrations) in the Life Sciences growth sector in Scotland increased by 25%, from 40 in 2021 to 50 in 2022. The business death rate, which is the number of deaths as a percentage of active businesses, was 8.3%. In comparison, business deaths in Life Sciences across the UK increased by 1.3% between 2021 and 2022, with a death rate of 9.0%.

### Sources of information

**GDP** – Scottish Government Quarterly GDP Index.

**Employment** – Business Register and Employment Survey.

**Exports** – Export Statistics Scotland.

**Turnover & GVA** - Scottish Annual Business Statistics.

**Enterprises** – Inter Departmental Business Register.

**Earnings** – Annual Survey of Hours & Earnings.

**Business Demography** - Inter Departmental Business Register and ONS Business Demography.

All data are available from the Growth Sector Statistics Database: <https://www.gov.scot/publications/growth-sector-statistics/>

All percentages and percentage changes over time are calculated based on the rounded figures shown in the Growth Sector Statistics Database.

Data for the Life Sciences Cluster is available from the Life Sciences Sourcebook: <https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2019/07/growth-sector-statistics/documents/life-sciences-cluster/life-sciences-cluster/govscot%3Adocument/Life%2Bsciences%2Bcluster.xlsx>

For more information about the methodology behind the Growth Sector Statistics Database, please see the Methodology Note: <https://www.gov.scot/binaries/content/documents/govscot/publications/statistics/2019/07/growth-sector-statistics/documents/growth-sector-method-note/growth-sector-method-note/govscot%3Adocument/Growth%2BSectors%2BMethodology%2Bdocument.docx>

1. The index represents the volume of GVA created compared to the ‘base’ year (currently 2019). Figures are deflated to remove the effect of price changes over time to produce an estimate of real terms (or constant price) growth. The figures are seasonally adjusted to remove the effects of regular, calendar based cycles in certain industries. [↑](#footnote-ref-1)
2. Scottish Enterprise takes results from Life sciences company matching exercise and adds separate data for Higher Education Institutions (data provided by Higher Education Statistics Agency) to produce overall employment. [↑](#footnote-ref-2)
3. The figures for the growth sectors are derived by aggregating estimates based at a low Standard Industrial Classification (SIC) level. Export Statistics Scotland is not designed to collect data at this level of accuracy, therefore these results should be treated as indicative. [↑](#footnote-ref-3)
4. Employment statistics referred to here are not directly comparable with Business Register and Employment Survey (BRES) employment data. [↑](#footnote-ref-4)