

The background of the entire page is a blue-tinted image of a laboratory setting. A glass pipette is shown in the upper right, with a single drop of liquid hanging from its tip. Below the pipette, a petri dish is visible, containing a grid of small, dark spots, likely representing a DNA microarray or a similar scientific assay. The overall aesthetic is clean, professional, and scientific.

**Productivity and
profit: forecast
for the UK life
sciences sector**

Introduction

The outlook for the UK's diverse and established life sciences sector is broadly positive. The Covid-19 pandemic drove parts of the industry higher up government priorities and into the public consciousness, and the wider life sciences sector fits into post-Brexit plans to make the UK an innovation power player. Meanwhile, the sector is likely to see lesser effects from economic downturn than many others in terms of sales, with households and the health service retaining spending levels on pharmaceuticals.

However, historically the sector in the UK has been slow growing. Its contribution to UK GDP contracted between 2010 and 2019, whilst its European rivals all expanded over the same time period. There are also questions about the UK's ability to compete funding-wise with its EU neighbours.

On the regulatory front, the sector is facing a period of change as post-Brexit revisions take effect. From the beginning of 2024, companies will need regulatory approval from the UK's Medicines and Healthcare products Regulatory Agency (MHRA) to sell medicines and medical products in the UK. As many UK-based life sciences businesses also sell into other European markets - with approximately half of UK exports of medicines and medical products going to the EU - these companies will need to continue obtaining separate regulatory approval from the European Medicines Agency, creating an increased compliance burden.

**One in every
121 people who
were employed
in the UK in 2020
worked in the life
sciences sector**

Economic contribution of the life sciences sector

Life sciences spans the research, development and manufacture of medical biotechnology, pharmaceutical products, medical equipment, instruments and supplies.

The sector makes a significant contribution to the UK economy. Official statistics show it employed 268,000 people in the UK in 2020.¹ So one in every 121 people who were employed in that year worked in the sector. This includes those who work in clinical trials and drug development. The datasets available on its contribution to GDP only capture a smaller part of the sector (as defined by the ONS industrial classifications). This narrower definition of the sector show it made a £13 billion contribution to UK GDP in 2020, or 0.6% of the total.²

The sector has promising long-run growth trends; increased purchasing power in developing economies, ageing populations, and increased interest in health in developed ones means demand is expected to be strong. Within the UK, consumer spending on medical products, appliances, and equipment between 2022 and 2032 is forecast to grow by 34% in real terms, more than double the growth in consumer spending on all goods and services.³

It is also a sector where the UK has several strengths relative to other industrialised economies. It scores highly for government budget allocated to health R&D (as a % of GDP), ranking third out of 15 countries. Some of its universities rank among the best in the world for research into life science and medicine. Its medical science journals are also amongst the most highly cited. An example of a particular area of UK strength in life sciences is genomic sequencing. The Covid-19 pandemic illustrated the UK's capabilities in this field; the UK managed to contribute to around half all the sequences of the global Covid-19 genome repository.

Loss of competitive advantage through poor productivity

The UK's economy has been beset by poor productivity performance since the global financial crisis. In the life sciences sector, output has been worse than the majority of the economy as labour productivity declined by an average of 2.7% a year between 2010 and 2019 (the last year before the pandemic (Fig. 1)).⁴

It was not alone; productivity in the life science sector also fell in Spain (by an average of 0.8% a year over the same time period). In Italy, Germany and France productivity rose on average each year.

The UK life sciences sector's poor productivity performance is important as it impairs price competitiveness and profit margins. This deters firms from investing in the sector.



¹ [Life science sector data, 2022](#)

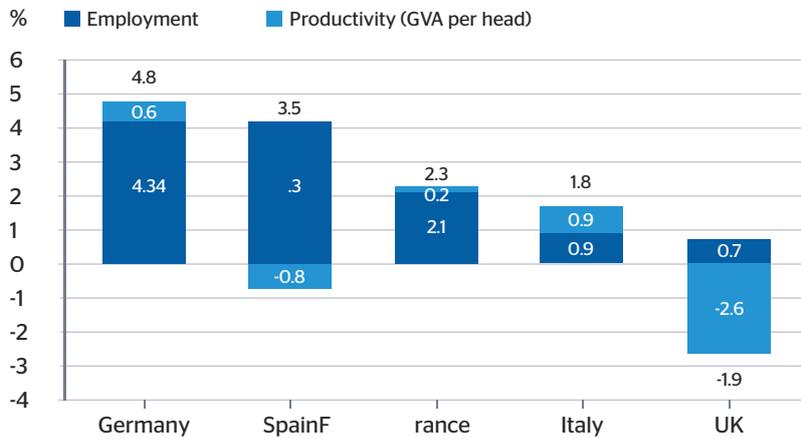
² It includes the SIC codes: Manufacture of basic pharmaceutical products & pharmaceutical preparations (21); Manufacture of irradiation; electromedical & electrotherapeutic equipment (26.6); Manufacture of medical & dental instruments & supplies (32.5); and Research and experimental development on biotechnology (72.11)

³ [Oxford Economics' COICOP forecasts](#)

⁴ Where labour productivity is measured by the average gross value added produced by each worker.



Fig 1: Annual growth in the life sciences sector’s contribution to GDP in real terms, decomposed into change in employment and worker productivity between 2010 and 2019



Source: Eurostat; ONS; Oxford Economics

The decline in productivity more than outweighed the small rate of growth in employment

The decline in productivity more than outweighed the small rate of growth in employment, so the sector’s contribution to UK GDP declined by an average of 1.9% a year in the decade prior to the Covid pandemic (2010-2019). In contrast, its major counterparts in Europe, all increased their contribution to their nation’s GDP over the same time period, with the growth in Germany and Spain outstripping the rest.

The Covid 19 pandemic impacted the life sciences sector in multiple ways. As the largest sector, the pharmaceutical sector has driven most of these changes. The latest data suggests that gross value added (GVA) in the life sciences sector rose by 4.4% in real terms in 2020. This is significantly above the 11% contraction in UK GDP. In 2021, life sciences GVA increased by 4.7%.

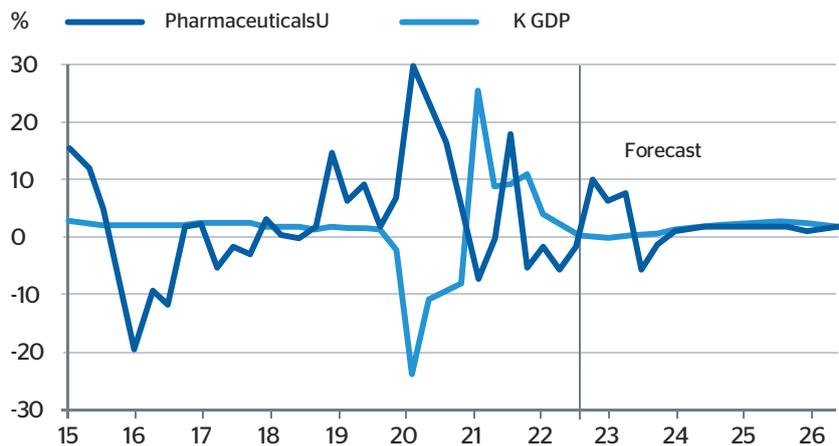


UK pharmaceutical sector output growth forecast to outstrip its European counterparts in 2023

Focusing on the dominant pharmaceutical sector, we predict pharmaceutical output will grow by 4.1% in real terms in 2023 (Fig. 2). It will therefore help drive growth in the UK economy this year, with UK GDP forecast to grow by just 0.3%.

The sector enjoys a more upbeat projection in 2023 than the economy as a whole, and this partly reflects that demand for pharmaceuticals is less sensitive to the economic cycle relative to other goods and services. This includes demand from the public sector (the NHS is the largest buyer of pharmaceutical products) and consumers' willingness to continue to spend on these items despite the real value of households' budgets have been eroded by inflation and the increase in interest rates.

Fig 2: Annual growth in pharmaceuticals and whole economy output in real terms (%)



Source: Oxford Economics

The forecast of UK pharmaceutical output growth of 4.1% in 2023 exceeds that of its competitors in Germany at 1.2%, France at 2.6%, and Spain at 3.7%. It is below that of Italy at 5.7% and the Nordics.

For the next three years (2024 to 2026), UK pharmaceutical output growth is forecast to average 1.3% a year. This outstrips the growth of its counterparts in the Nordics and Italy which are predicted to grow by 1.0% and 1.1% a year, but is below that of Germany at 2.0%, Spain (at 2.5%) and France (at 2.6%).



Future risks to watch

- > **A potential government response to the EU's recent pharmaceutical package:** does the UK follow suit and reduce red tape – but also prices? Should the UK opt to apply similar measures, this would make it easier for companies operating in both markets, while significant diversion could further complicate compliance. The government has given little indication of its intent to reform the sector's regulatory framework and legislative change may well fall down the priority list ahead of the next elections, prolonging uncertainty into the next parliamentary term.
- > **Progress on negotiations for renewed UK membership of Horizon Europe, the EU-led funding programme for research and innovation.**⁵ Although the Windsor Framework agreement on the post-Brexit status of Northern Ireland paved the way for the UK to rejoin the programme, disagreements about costs could still derail the plan.⁶ The government has indicated that it could instead still choose to fund projects directly, outside Horizon. Until the UK decides which path to take, life sciences research in the UK faces significant funding uncertainty.
- > **Healthcare policy positioning ahead of likely 2024 elections:** is the focus purely on primary care or do political parties have broader ambitions, such as rolling out innovative treatments? Both the Conservatives and Labour are likely to make support for the NHS a key electoral position. However, details of policies related to interaction between healthcare and the life sciences sector are so far thin on the ground. The research and development side of the sector is likely to struggle to make its voice heard with potential policy-makers who are focusing on what they view as more urgent issues for voters.



⁵ Horizon Europe is the EU's key funding programme for research and innovation with a budget of €95.5 billion.

⁶ The Windsor Framework announced in late February 2023 is the agreement between the UK and European Union about the trade relationships that govern Northern Ireland. It replaced the Northern Ireland Protocol.



What can life science firms do to boost growth

The pandemic changed the way many aspects of medical treatment worked. There was a shift from in-person to remote delivery, and a rapid increase in the digitalization of health from apps to wearable devices. Firms across the life science industry need to take advantage of the new opportunities digitalisation offers for trial participants, patients and staff. This includes the recruitment of trial participants and patients, undertaking testing and monitoring remotely in the home, and enhancing access to health records. This should lower costs, and increase resilience to transport disruption or future pandemics. Albeit data security and digital exclusion concerns are likely to grow.

As was demonstrated in the pandemic, UK universities lead the world in some fields of medical research (for example, geonomics and vaccines). Firms within the sector need to learn how to take advantage of the geographical proximity of these institutions to stimulate their R&D and technological innovation. In fields where UK universities are less cutting edge, make connections with the European and global counterparts to keep abreast of the research and knowledge frontier. Good relations with universities (both within the UK and abroad) also helps the recruitment of new talent and retention of existing R&D staff by raising their enthusiasm and interest levels.

The pandemic had an adverse impact on UK labour supply, with 660,000 more people being economically inactive in 2022 than in 2019. This has led to record vacancy numbers and rates. As with most sectors, life science firms need to review their recruitment and retention policies to attract and retain talent. This may include borrowing ideas from their major European competitors, who all grew the workforces more rapidly than their UK counterparts in the previous decade.

The switch to the MHRA for the regulation of medicines and medical products in the UK could offer opportunities to life science firms. Both in the way the regulator may operate (such as the rapid approval protocols for the most impactful technologies and medicines such as cancer and mental health therapeutics) to satisfying overseas suppliers needs to sell into the UK. Firms should assess where these opportunities lie and be ready to take advantage of them.

Life science firms need to review their recruitment and retention policies to attract and retain talent



This report has
been developed
for QBE by
Control Risks and
Oxford Economics

QBE European Operations

30 Fenchurch Street
London EC3M 3BD
tel +44 (0)20 7105 4000
QBEurope.com

QBE European Operations is a trading name of QBE UK Limited, QBE Underwriting Limited and QBE Europe SA/NV. QBE UK Limited and QBE Underwriting Limited are both authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and Prudential Regulation Authority. QBE Europe SA/NV is authorised by the National Bank of Belgium under licence number 3093.

