Future Gazing

Manufacturing evolution and implications for industrial and logistics

2025

Exploring the evolving landscape of UK manufacturing, its influence on the industrial and logistics market, and considerations for investors

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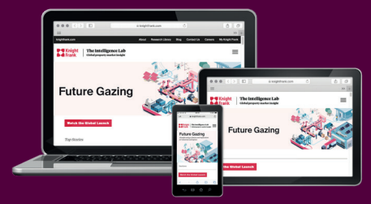

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Foreword

The industrial and logistics sector has a broader occupier base now than it ever has done. Before the huge rate of growth recorded in online retail, and the associated growth in distribution networks and demand for specialist fulfilment centres, manufacturing – particularly traditional manufacturing sectors or heavy-industries – were mainstays of the industrial sector.

Over the past twenty years I have seen the sector evolve. Away from the dominance of manufacturing and B2B distribution, with the growth of online retail driving demand for fulfilment and B2C distribution. While growth in online retail and the retail sector more broadly, continue to drive demand in the sector, we are now seeing additional sources of demand rising out of a growing and evolving manufacturing sector in the UK.

This is not simply a cyclical upswing or a resurgence in the manufacturing sector of yesteryear. Recent and future growth of manufacturing is dependent on new advanced manufacturing sectors and high-tech industries, and on new drivers and new sources of demand. This shift in the nature of manufacturing has meant shifts in terms of the types of occupier businesses and their requirements for facilities, both in terms of specification and location.

The locations and specifications of the properties occupied by manufacturers twenty years ago are not (necessarily) the same as those now in demand from these high-growth manufacturing sub-sectors. The diverse and highly specialised nature of different manufacturing sub-sectors mean that requirements are extremely varied.

However, occupiers are increasingly focused on locations that can offer access to highly skilled labour and specialist talent pools. They also want modern, well-specified facilities in order to attract and retain this talent. Additional considerations for facilities are increasingly focused on sustainability and maximising operational efficiencies.

Demand for industrial space has come from a wide range of manufacturers, including traditional sectors such as aerospace and defence, and emerging industries such as hydrogen generation and life sciences. The Knight Frank team has recently been involved in several high-profile transactions, including:

- BAE Systems (Defence): 90,000 sq ft
- ITM (Hydrogen Generation Systems): 134,000 sq ft and 83,000 sq ft
- Technicut (Aerospace): 86,000 sq ft
- Forgemasters (Defence): 21 acres
- Farsound Aviation (Aerospace): 55,000 sq ft
- Speciality Breads (Food Manufacturing/Bakery): 180,000 sq ft

This report explores the current and future growth prospects for UK manufacturing and the opportunities this presents from a real estate perspective. It identifies the sectors expected to drive growth, the policies supporting this expansion, and the regions likely to benefit.

Additionally, it examines the evolving preferences and requirements for industrial facilities.

There are numerous reasons for investors to take note, as the sector's expansion presents opportunities for long-term, stable income, particularly through the growing demand for bespoke, high-specification facilities in strategic locations. This report outlines the potential opportunities, as well as the associated risks, offering a clear strategy to capitalise on trends in occupier demand, emerging industry clusters, and supportive policy initiatives. By understanding the nuances of sectoral growth and regional performance, investors can position themselves to benefit from this growth, while also mitigating risks.

CHARLES BINKS
Partner, Department Head
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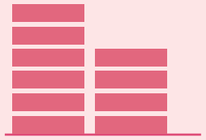
10 KEY POINTS

1

Sector growth:

The UK manufacturing sector output is projected to grow by 12% by 2033, presenting significant opportunities for real estate investors.

2



Longer leases and stable income:

Manufacturing occupiers typically sign longer leases (averaging 12.1 years) to amortise substantial investments in machinery and custom fit-outs. This creates a "sticky" tenant base, as firms heavily invested in their facilities are less likely to relocate, resulting in stable, predictable income streams for landlords.

3

Government incentives driving investment:

Tax policies, such as the full expensing allowance for capital investment, have boosted occupier investment in plant, machinery, and real estate. This has aided and incentivised manufacturers to invest in their facilities and equipment and created favourable conditions for investors seeking secure, long-dated income from manufacturing assets.

4

Yields and risk premiums:

Yields for manufacturing properties are typically higher than those for logistics assets due to the bespoke nature of facilities and covenant-related risks. While custom specifications (e.g., unique building dimensions, R&D spaces) can enhance tenant retention, they may also pose reletting challenges.

5

Green lease clauses and sustainability:

Investors increasingly incorporate green clauses into lease contracts to meet sustainability goals and regulatory requirements. However, manufacturing tenants may resist clauses that require data sharing or significant operational changes due to concerns over costs and confidentiality.

6

Regional disparities and growth hotspots:

Regions such as the North West, West Midlands, and South East are key hotspots for manufacturing growth, particularly in sectors like pharmaceuticals, aerospace, and food production. Investment zones and cluster-based policies further amplify these growth prospects. Understanding regional and local dynamics is essential for identifying investment opportunities and demand trends.

7

Manufacturing take up and growth prospects:

Manufacturing occupiers have accounted for 28 million sq ft of take-up (units over 50,000 sq ft) over the past three years, with more than half of this in new-build facilities, reflecting strong demand for modern, high-specification sites. The UK manufacturing sector is forecasted to grow by 12% by 2033, raising questions over future requirements.

8

Regional variations in productivity:

The North West holds the largest share of UK manufacturing floor space (16.2%) and leads in output (£29.5 billion GVA). Despite having a much smaller share of floor space (3.8% of the UK total), the South East ranks second in terms of output (GVA), highlighting regional productivity disparities.

9

Sub-sector shifts and facility requirements:

The evolving composition of the manufacturing sector, with growth in advanced manufacturing and pharmaceuticals and a decline in traditional sectors like textiles, necessitates upgraded or new facilities tailored to high-tech production processes.

10

Aerospace, Defence, and Automotive Sectors:

Increased defence spending and aviation demand are driving industrial property take-up. Automotive clusters in the West Midlands and North West are poised for growth but remain vulnerable to global trade dynamics.

Introduction

Investors are increasingly recognising the long-term growth potential in UK manufacturing and the impact that this will have on real estate demand. Respondents to Deloitte's 2025 CRE survey chose industrial and manufacturing as the top sector for global real estate owners and investors in 2025; this is up from a ranking of sixth in last year's survey and ninth in 2023.

The prospects for manufacturing in the UK specifically also appear bright. Oxford Economics forecasts 12% expansion in output over the next ten years. Manufacturing divisions with particularly robust growth prospects include 'other transport equipment', the 'computer, electronic and optical equipment' sector, and 'basic pharmaceuticals'. These high-growth subdivisions will drive demand for industrial and logistics space, which will be felt most in the North West, South East, and South West. However, further bright spots of growth exist across other sectors and regions.

Despite the long-term structural growth prospects for the sector, in the near term, the UK's manufacturing sector faces some challenges and downside risks. The latest UK manufacturing PMI figures (December 2024) are downbeat. A stalling domestic economy and concerns about future cost increases are weighing on business sentiment. Current global market conditions are also providing headwinds, with lower demand from Europe, Asia, and the US impacting exports. Continued geopolitical uncertainty and potential policy changes following the US elections also threaten to dampen growth prospects.

Manufacturing operations and the real estate they occupy also come with unique and diverse risks and considerations that investors should be mindful of. These relate to individual business/operating models, energy usage, labour requirements, business investment in equipment and facilities, bespoke requirements for facilities, and the potential for high levels of investment in fit-out and customisation. These requirements can mean that tenants wish to remain in situ for longer but can also bring risks associated with reletting.

There are also some manufacturing sectors experiencing contraction, which could pose a downside risk for some segments of the market and demand in specific locations.

Investing in manufacturing real estate means navigating the nuances of different segments of the market, with differing growth prospects and considerations, as well as this dichotomy between strong long-term growth, particularly within certain sectors and locations, alongside weaker sentiment over near-term prospects. This report seeks to explore some of the industries and locations poised for growth and considerations for investing in manufacturing real estate, compared with other sectors or asset classes.

> "Investors are increasingly recognising the long-term growth potential in UK manufacturing and the impact that this will have on real estate demand."

Why invest in manufacturing real estate?

The future prospects for the UK manufacturing sector appear bright. Expansion of the sector is anticipated to accelerate over the next ten years (with 12% output growth by 2033, compared with 8.6% in the past ten years, according to Oxford Economics).

Manufacturing and production assets can also offer diversification benefits for real estate investors as a distinct asset class from logistics (B8) or other CRE sectors. Average rental growth for manufacturing and production assets has outpaced that of most other sectors.

Strong levels of business investment in manufacturing, supportive government policies (around taxation), and targeted government investment can work to promote stability in the occupier base, thus offering landlords improved covenants and strong growth prospects.

However, prospects are not equal for all subdivisions, and therefore, risks vary according to sector. Covenant strength can differ greatly from business to business, even within high-growth subdivisions, resulting in a need to understand the composition and drivers of the manufacturing sector in more detail.

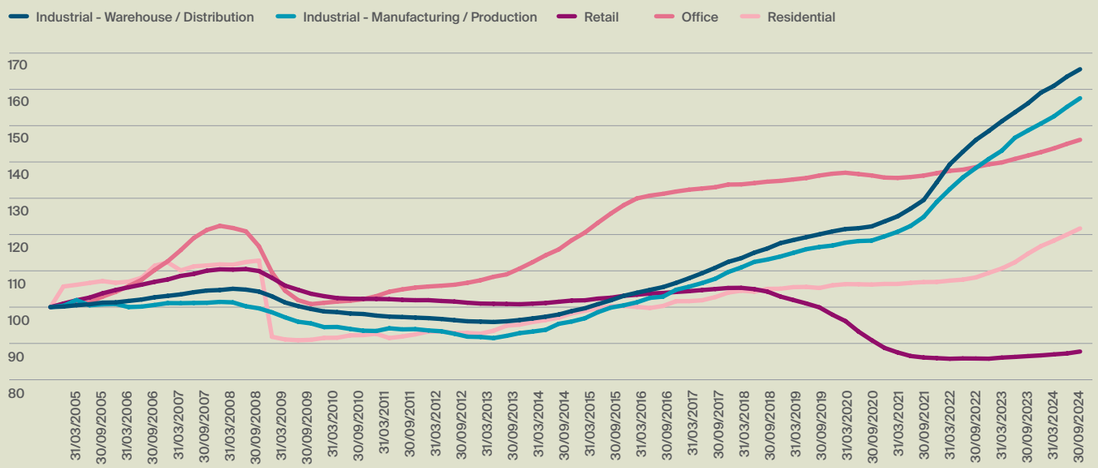
There are also specific nuances attached to the sector's underlying real estate, and this can pose both risks and opportunities for investors. Robust levels of investment in their businesses, technology, and facilities mean that manufacturing tenants tend to seek longer leases. These longer leases can provide investors with a stable and predictable rental income.

However, manufacturing firms tend to have more bespoke building requirements with features specifically targeting their operational requirements; these may relate to building dimensions, fit-out or energy provision requirements, or other features relating directly to their operations. Some operations may co-locate manufacturing functions with office-based operations, research and development, or distribution functions. This can mean a highly bespoke facility that would not be easily relettable should the tenant default/vacate.

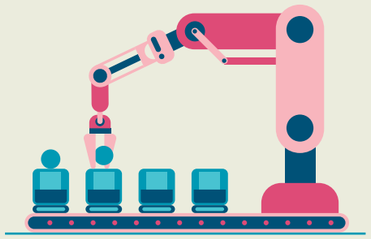
RENTAL GROWTH

As well as lower vacancy and longer lease terms compared with other property sectors, rental growth has also compared favourably. Rental growth

Rental growth for manufacturing assets has outpaced all CRE sectors except for warehousing and distribution
Index: Dec 2004 = 100



Source: Knight Frank Research, MSCI



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for manufacturing and production assets correlates strongly with that of warehousing and distribution, with strong rental growth exhibited over the past ten years and particularly over the past five. Rental growth for manufacturing and production has slightly lagged that for warehousing and distribution but outpaced that of all other sectors.

In the last five years, landlords have held a strong negotiating position, due to low vacancies and robust tenant demand. With strong rental growth, landlords have sought open market rent reviews. This, along with shorter lease terms, has enabled stronger rental growth for warehousing and distribution assets.

As facilities tend to be more bespoke, manufacturing and production assets have longer leases and a stronger tendency towards index-linked rent reviews. These typically have a cap and collar mechanism, which sets the minimum and maximum rise (typically set at 2% and 5%). This has capped some of the rental growth experience in this segment of the market.

However, with vacancy rates having risen significantly in recent years and rental growth for industrial and logistics assets expected to slow over the next five years, index-linked rent reviews may become more prevalent for warehouse and distribution assets.

'STICKY' TENANTS

Manufacturing firms invest heavily in their businesses. They often install expensive equipment in their facilities and invest in training and development for their employees, who need specialist skills and training to operate this equipment. Businesses investing heavily in their facilities and the local labour pool are less inclined to relocate. For landlords, this can mean 'sticky' tenants who are less likely to exercise break options and more likely to renew at the end of a contract term.

Manufacturing tenants tend to opt for longer leases on industrial and logistics assets compared with distribution or retail firms. Over the past five years, new leases for manufacturing firms have averaged 12.1 years, compared with 10.7 years for distribution firms and 11.5 years for retail firms.

With many manufacturing operations highly automated or mechanised, firms invest heavily in their plant and machinery. According to the Make UK/RSM UK Investment Monitor Survey 2024, almost two-thirds of manufacturers (64%) invest up to 10% of their turnover in plant and machinery, with a further 26% investing 10-50% of turnover.

Manufacturing equipment is typically very costly to install and may be difficult – and expensive – to remove. It is also usually highly specialised in terms of its functionality. A vacant building, therefore, has a lower prospect of being relet with the equipment in situ and a higher cost associated with refurbishing the building and removing equipment.

However, firms planning this form of investment will weigh up their future demand projections alongside risks associated with levels of future demand, the tax implications or potential changes, and the costs associated with financing this investment. Firms typically amortise their investment into machinery over the length of their lease. With the installation of costly equipment that is often bespoke or customised, long leases are often favourable.

BUSINESS INVESTMENT AND SUPPORTIVE GOVERNMENT POLICY

Across manufacturing, business investment has more than doubled over the past ten years. Substantial increases have been recorded in the past three years, with government policies introduced to help boost investment (and soften the impact of rising corporation tax).

In March 2021, then-Chancellor Rishi Sunak announced the introduction of the 'super deduction' and the 'Special Rate (SR) allowance'. Originally announced as a temporary measure (to expire in 2023), the UK Government subsequently announced that the relief will remain permanently in place. Effectively, the (now-permanent) full expensing allowance means companies should receive a 100% first-year tax deduction for expenditure on qualifying plant or machinery - essentially reducing the in-year cost of plant or machinery by 25%.

These tax breaks have acted to incentivise business investment, and their continuation will provide firms with certainty around expenses associated with capital investment and enable them to better plan for business expansion and investment in the coming years.

For institutional investors seeking a long-dated secure income with minimal active management requirements, industrial facilities focused on production (typically B2) or B8 facilities that manufacturing firms occupy, could offer an attractive risk/return profile with tenants' growth and investment plans supported through government policy and where investment is focused on their facilities, incentivising them to remain in-situ.

"Over the past five years, new leases for manufacturing firms have averaged 12.1 years, compared with 10.7 years for distribution firms and 11.5 years for retail firms."

64%

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BUILT ASSETS AS AN ALTERNATIVE TO DIRECT INVESTMENT

There is, of course, more than one way to invest in the growth of a sector. For alpha-driven investors, equities will offer the most significant potential, but for institutional investors concerned more with wealth protection and inflation hedging, fixed-income options such as corporate bonds and real estate may offer greater security of income. Real estate has the added advantage of being a tangible asset, which can provide additional security and stability and help limit downside risk, with underlying value in the land and built assets.

HOW DO YIELDS FOR MANUFACTURING PROPERTY COMPARE WITH CORPORATE BONDS?

Yields for manufacturing assets tend to compare favourably with corporate bond yields for manufacturing firms.

Similar to real estate (or gilts), corporate bond yields typically offer fixed cash flows. These tend to be at a higher yield than gilt yields due to the additional risks attached to corporate covenants. Individual corporate bond yields reflect the risk perceptions associated with the manufacturing sector as a whole, the specific sub-sectors in which the company is active, and – most importantly – the strength of the company's corporate covenant. These factors (along with real estate-specific ones) can also influence yields for these companies' real estate assets.

Quantifying the difference between corporate bond yields and real estate yields is difficult due to a lack of comparable data. We can, however, consider individual examples of corporate bond yields and how these compare with the real estate benchmark yields. Our Knight Frank Prime Yield Guide indicates c.5-5.25% NIY for prime distribution and warehousing assets with 15-20 years income (December, 2024). While yields for manufacturing assets tend to be higher than distribution assets (as evidenced by the MSCI index and individual transaction examples), we can compare this benchmark with 'prime' or investment-grade corporate bond yields. Manufacturing companies, Honeywell International, Airbus, BAE Systems and Unilever, together, have corporate bonds (maturity dates 10-20 years), averaging a yield of 4.1%. Of course, within this sample, there are variations in terms of corporate credit ratings and manufacturing subdivisions that will influence these yields.

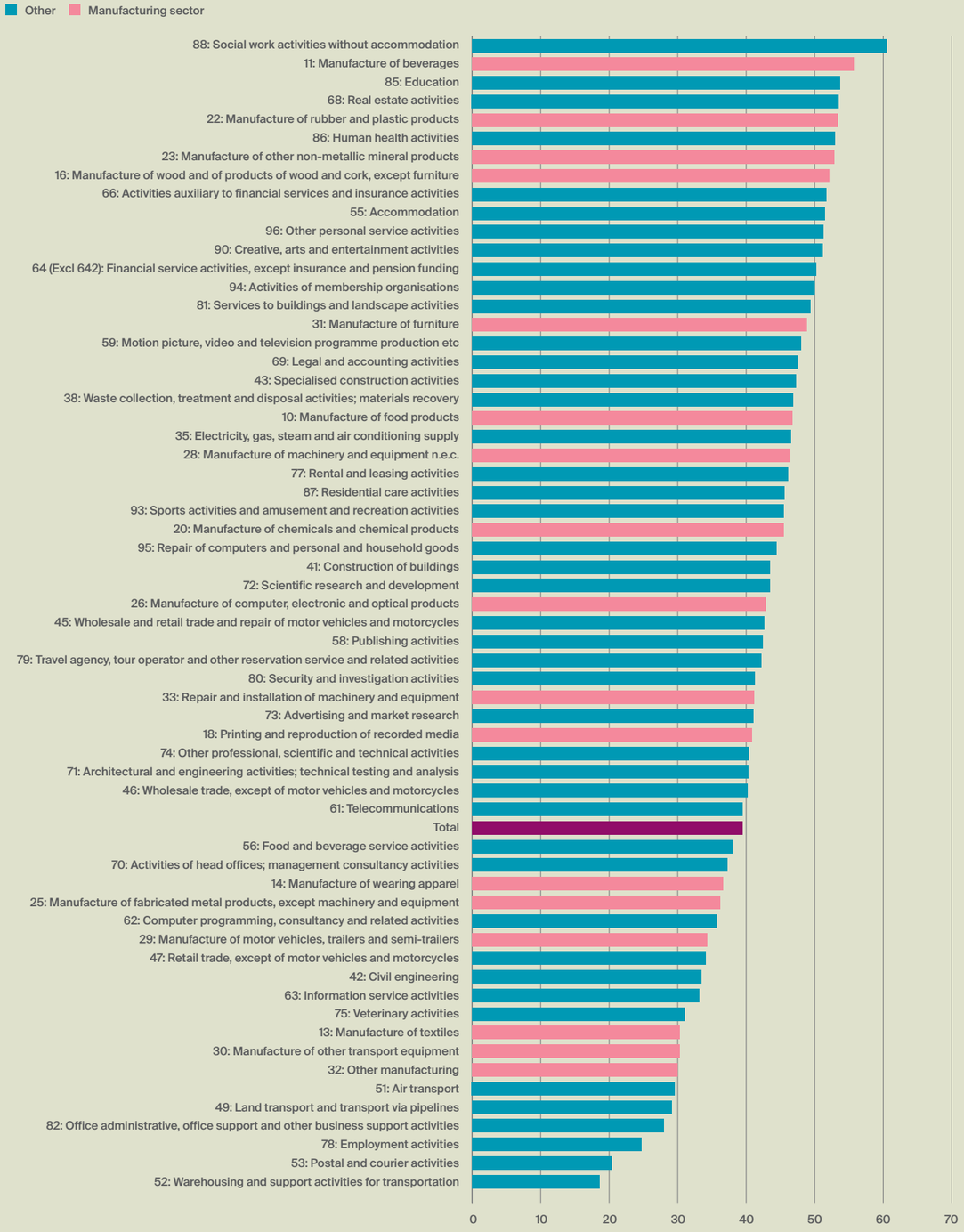
TENANT COVENANT

Of course, tenant covenant strength can't be assessed at a sector or sub-sector level. However, we can take the pulse of the market in a broad sense by considering business survival rates.

There is great variety in the success rates according to different manufacturing sub-sectors. Across all businesses established in 2018, 39% were still in operation five years later. Manufacturers of textiles and wearing apparel tended to fare worse, with lower success rates of 30% and 37%, respectively.

"Manufacturing tenants tend to opt for longer leases on industrial and logistics assets compared with distribution or retail firms."

Five year survival rates by sector
(% businesses established in 2018)



Source: Knight Frank Research, ONS

> "The manufacturing sector encompasses many different subdivisions, with products going to various different applications and markets."

However, many manufacturing sub-sectors fared better than average, with a success rate of 56% for beverage manufacturers, 53% for manufacturers of rubber and rubber products, 47% for manufacturers of food products.

Interestingly, the two sectors with the poorest survival rates were warehousing and support activities for transportation and postal and courier activities. Operating on thin margins, companies in this segment of the market have been hit hard by rising inflation and spikes in shipping costs. Furthermore, the rapid expansion of the online retail market has been a key driver of growth in this segment of the market in recent years. However, some online retail operations overexpanded, particularly during the pandemic and there were cases of third-party logistics firms (3PLs) having contracts terminated. These factors are likely to have weighed on the survival rates of firms in these sectors.

The manufacturing sector encompasses many different subdivisions, with products going to various different applications and markets. The markets and drivers influencing demand are numerous and varied, and this is reflected in the variation in survival rates across sub-sectors.

Covenant risk is perceived as a more significant factor for an asset that is designed and built with high levels of customisation for the tenant or in a market with a shallow occupier base or high vacancy rates; it is also given heightened consideration in an economic downturn. In the down cycle, lease length normally becomes more relevant due to a lower probability of reletting, weaker prospects of rental growth, and increased risk of default.

Covenant strength risk is factored into and included within the risk premium over conventional gilts. The average equivalent yield for manufacturing/production property is currently 6.3%, according to the MSCI Quarterly Index, compared with 6.1% for warehouse and distribution assets (September 2024). Manufacturing and production assets, therefore, have a greater spread over gilt yields. At the end of September, the spread was 234 basis points (bps), compared with 206bps for warehousing and distribution assets. This higher yield premium may reflect a higher risk associated with more customised facilities and a shallower occupier base. It may also reflect a higher perceived risk associated with the occupier base.

For almost ten years, from Q3 2015 to now, yields for warehousing and distribution assets have been lower than those for manufacturing assets. However, yields for manufacturing and production assets have not always been above those for warehousing and distribution. During the previous five years (Q3 2010 – Q2 2015), yields for manufacturing and production facilities were generally lower. This was also the case between Q1 2001 and Q4 2005.

> "The markets and drivers influencing demand are numerous and varied, and this is reflected in the variation in survival rates across sub-sectors."

Potential headwinds for the manufacturing sector

(And other considerations for investors)

GEOPOLITICAL HEADWINDS, SUPPLY CHAIN RISKS, AND SHIFTING TRADE RELATIONSHIPS

The UK manufacturing sector is highly exposed to international demand, global supply chains, and trade policies. Exports are a much more important source of demand for the manufacturing sector than the overall economy. According to Oxford Economics, overseas sales represent 35% of demand for UK manufacturing output, compared with 16% across the broader economy. This means that shifts in international demand or trade policies can have a disproportionate impact on the manufacturing sector.

Conversely, weak domestic demand does not necessarily lower the outlook for the manufacturing sector. According to recent data (Q3 2024), domestic orders have weakened, but exports are performing well, with external demand appearing more robust than the domestic market.

Supply chains are and will continue evolving. Shifting procurement strategies (such as dual sourcing, or reshoring) may be driven purely by a need to protect order books from supply chain vulnerabilities, but there may be other reasons too. These may be connected to sustainability concerns or ESG reporting requirements. They may also be driven by government legislation and tax incentives. In the US, the introduction of the Inflation Reduction Act provided incentives to US manufacturers to base their supply chains within the country. This led to some instances of US manufacturers relocating their UK-based operations back to the US.

However, while the UK manufacturing sector may be somewhat exposed to foreign governments' policies and other international externalities, shifting geopolitical relations are also producing tailwinds. Indeed, there are examples of companies reshoring operations. In 2023, Oxford Instruments, which designs and manufactures equipment for scientific researchers, decided to move its 'sensitive products', including quantum technologies, out of China due to geopolitical worries.

> "Manufacturing operations tend to require a larger, more specialised workforce compared with storage and distribution operations (of an equal size)."

OPERATING COSTS AND ASSOCIATED RISKS

Wages and energy costs comprise a significant proportion of manufacturers' operational costs. Some manufacturing operations rely heavily on labour, others on high energy consumption, and some on both. This can make businesses vulnerable to fluctuations in energy costs or changes related to their wage bills.

Labour costs

In general, manufacturing operations tend to require a larger, more specialised workforce compared with storage and distribution operations (of an equal size). Average wages in the manufacturing sector are high relative to other sectors and reported to be 10% higher than the economy as a whole. Employment densities also tend to be higher in B2 facilities than in B8.

10%

Average wages in the manufacturing sector are high relative to other sectors and reported to be 10% higher than the economy as a whole. Employment densities also tend to be higher in B2 facilities than in B8.

According to the Employment Density Guide 3rd Edition (2015), B2 Industrial & Manufacturing facilities have an employment capacity of c.36 sq m per employee. For B8, Storage & Distribution employment densities range from 70 sq m per employee in Final Mile Distribution to c.95 sq m per employee in national distribution centres. This means that a manufacturing facility would be likely to have at least double the number of employees that a distribution facility would have and that wages typically account for a higher proportion of operating costs for B2 facilities compared with B8.

These higher operating costs associated with their workforce can mean they seek operational efficiencies in other areas. Manufacturers tend to invest heavily in technology to increase automation and improve operational efficiencies.

Top 10 business sectors for energy consumption by Megawatt per hour (MWh) of combined annual usage:

1. Commercial and miscellaneous services: 169,972,450 MWh
2. Public administration: 64,883,770 MWh
3. Manufacturing and industrial services: 42,042,450 MWh
4. Chemical manufacturing: 40,728,260 MWh
5. Food, drink, and tobacco manufacturing: 34,506,210 MWh
6. Mineral products manufacturing: 30,028,660 MWh
7. Printing and publishing: 21,294,530 MWh
8. Mechanical engineering: 17,596,190 MWh
9. Agriculture: 17,503,150 MWh
10. Iron, steel, and metal manufacturing: 17,410,110 MWh

Source: Tariff

Rising National Insurance contributions

In the Autumn Budget, Chancellor Rachel Reeves announced an increase in employers' national insurance by 1.2% to 15% while also cutting the threshold at which firms have to start paying the levy. Currently set at £9,100 a year, it will be reduced to £5,000 a year. Manufacturing businesses (along with businesses in other sectors) will face a higher tax bill in April as a result. The impact will be felt most by businesses with a greater reliance on labour, while more capital-intensive production will be better protected against this rise. Firms may seek to increase automation as a way to mitigate against these rises and improve productivity.

Energy costs

Compared with other segments of the economy, production industries are heavy users of energy and manufacturing sectors dominate the list of largest business energy consumers (by total usage). However, even within manufacturing, there is great variation in terms of energy usage and costs depending on the type of manufacturing taking place.

Its heavy reliance on energy meant the manufacturing sector was particularly exposed when energy prices surged in 2022. In Q3 2022, average electricity costs for manufacturing firms were 67% higher than a year earlier, while average gas prices rose 95% (y/y). This has a severe impact on production costs and an inflationary impact on producer output (factory gate) prices.

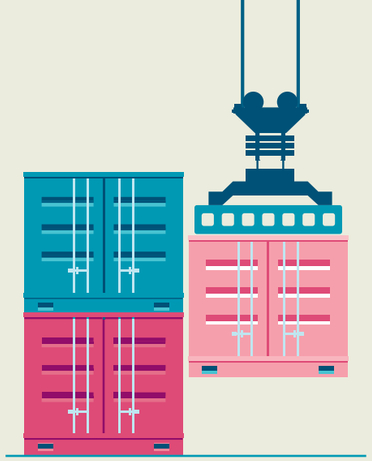
With utility bills hitting record highs, firms across all sectors have had to reassess their gas and electricity usage and exposure to volatile prices. On-site power generation and microgrid solutions are increasingly being explored by manufacturing firms to help mitigate power distribution and pricing volatility vulnerabilities as well as improve the sustainability of their operations.

COMPETITIVENESS OF THE UK GLOBALLY

The UK manufacturing sector is highly exposed to international demand, with overseas sales representing 35% of demand. The UK's manufacturing sector must, therefore, maintain a competitive edge. This means positioning itself effectively in key, high-value growth sectors as well as maintaining a relative cost advantage within those sector specialisms.

Across the global manufacturing sector, skilled labour is becoming increasingly important relative to low-cost labour. Consequently, education policy will play a crucial role in equipping the UK workforce with the skills needed for manufacturing in the future. To remain globally competitive, the UK must implement an education strategy that prioritises the development of talent in science, technology, engineering, and mathematics (STEM).

Rising global competition underscores the importance of agility, specialisation, and sustained investment in cutting-edge manufacturing sectors. Emerging economies, especially China, are advancing from low-cost manufacturing to sophisticated, high-tech production. This evolution intensifies competition, compelling the UK to focus on industries where it has a competitive edge by fostering innovation, increasing R&D investment, and developing a highly skilled workforce.



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A robust industrial strategy is crucial to keep UK manufacturing globally competitive, resilient to disruptions, and attractive for large-scale investments. The COVID-19 pandemic and geopolitical tensions have revealed the UK's dependency on imports for critical items like PPE and semiconductors. Strengthening domestic manufacturing is essential to enhance supply chain resilience and safeguard economic and national security. Notably, 70% of UK manufacturers believe a long-term strategy could accelerate reshoring efforts (Make UK).

GREEN LEASE CLAUSES

Investors are increasingly seeking green lease clauses to form part of their standard commercial lease agreements. A green lease includes clauses to encourage engagement and cooperation between landlord and tenant to improve the environmental performance of the building. For landlords, these clauses are viewed as ways to protect their assets, future-proof against upcoming environmental legislation and issues, and support environmental, social and governance (ESG) commitments and sustainability goals. They may also be obligated to include green clauses due to requirements attached to their planning or lending facility agreements.

Clauses may include obligations around the use, fit-out, management, and monitoring of energy usage, as well as environmental and building performance. Clauses may require tenants to undertake energy-saving initiatives, such as installing energy-efficient lighting, heating, and ventilation systems, or to achieve minimum sustainability certifications (such as BREEAM In-Use) or Energy Performance Certificates (EPCs). They may also include policies on waste management or require environmental reporting and performance monitoring.

Some production and manufacturing firms may view green lease clauses as too intrusive, particularly if they include data-sharing obligations. Manufacturing firms often don't wish to share this type of information as they may consider it to be commercially sensitive. They may also be viewed as restrictive if lease clauses seek to restrict tenant energy usage or alterations that might adversely impact energy efficiency (perhaps prescribing tenant's fitting-out works are within certain BREEAM requirements). They may also prohibit manufacturers from making other changes to operational practices as they would like.

It is likely that we will continue to see a growing number of 'green lease' terms being proposed in lease agreements. The onus is on landlords and tenants to develop workable solutions or clauses that can accommodate the unique needs and operational practices within manufacturing sub-divisions while incorporating and promoting sustainable practices and protecting the underlying asset value.

> "Investors are increasingly seeking green lease clauses to form part of their standard commercial lease agreements."

Manufacturing expansion

Understanding the scale of opportunity

The manufacturing sector appears to be set for expansion, with Oxford Economics forecasting that growth in output will accelerate over the next ten years. But what does this growth in output mean in terms of floor space requirements? How much space will be needed? Can existing facilities accommodate growth in manufacturing, or will new facilities be required? Understanding the future requirements of the sector in terms of real estate needs a deeper understanding of the UK manufacturing landscape: which sectors are set for growth, how space is utilised, where facilities are located, and what the relationship is between output and needs in terms of floor space/facilities.

WHERE IS MANUFACTURING CURRENTLY TAKING PLACE?

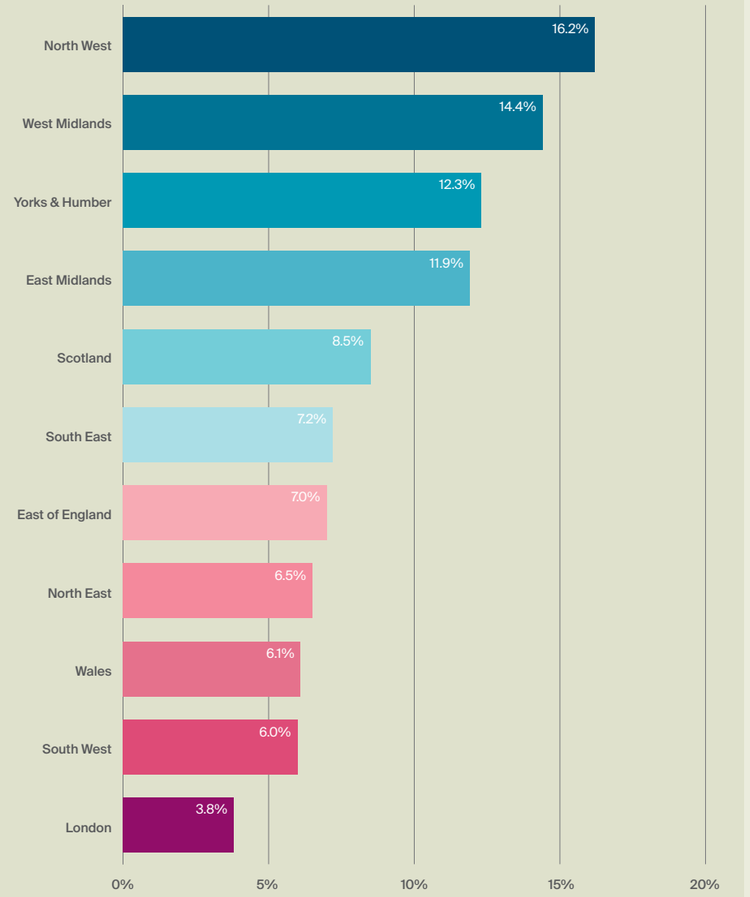
The North West accounts for the largest share (16.2%) of UK manufacturing and production floor space; this is followed by the West Midlands (14.4%) and then Yorkshire and Humber and the East Midlands, each with c.12% share of floor space. London has the smallest share (3.8%) of the UK's floor space, followed by the South West and Wales, each with c.6%.

HOW DOES THIS DISTRIBUTION OF SPACE COMPARE WITH OUTPUT?

As well as accounting for the largest share of floor space, the North West of England remains the leading manufacturing area of the UK in terms of output, with total manufacturing gross value add (GVA) worth £29.5 billion, 14% of the UK total. However, while the West Midlands comes second in terms of share of floor space, the South East region comes in second place in terms of output (GVA), with £26.1 billion, which represents 12.6% of the UK total. Meanwhile, the West Midlands comes in third place in terms of output (GVA) with £21.9 billion, or 10.6% of the UK total.

Northern Ireland accounts for the smallest share of UK manufacturing output (2.8%). However, Northern Ireland is excluded from the distribution of floor space analysis due to a lack of data. Aside from Northern Ireland, London, the North East, and Wales are the lowest in terms of manufacturing GVA; this corresponds roughly with the regions with the least floor space. However, the South West region, despite accounting for just 6.0% of floor space, accounts for 8.6% of GVA.

Occupied manufacturing space (sq ft) by region



Source: Knight Frank Research

"It takes 4,228 sq ft to generate each £million of manufacturing output."

MANUFACTURING PRODUCTIVITY – FLOOR SPACE UTILISATION

How efficiently floor space is being utilised depends on several (interdependent) factors, including the industries operating in that region and the operational costs associated with operating there. However, floor space requirements don't translate neatly into estimates of output.

High-value manufacturing sectors will typically generate greater GVA per sq ft of floor space. However, these sectors also have higher operational costs, with higher rents and a highly educated, more costly employee base. For many high-value manufacturing sectors, the need for highly educated or trained staff means that location choices are driven by the availability of specialist labour, with rent costs a secondary consideration. This may mean operational efficiencies are needed to keep costs down.

Technology is improving operational efficiencies in many manufacturing sectors, with greater automation improving accuracy and productivity. As a result, floor space utilisation rates have improved over time. Another factor driving increased manufacturing productivity is the shift away from heavy industry towards more high-value manufacturing sectors, which generate a greater GVA per floor area.

HOW MUCH FLOOR SPACE DOES IT TAKE TO GENERATE £1 MILLION OUTPUT (GVA)?

Across the UK (excluding Northern Ireland), it takes 4,228 sq ft to generate each £million of manufacturing output (based on current floor space occupancy and 2023 manufacturing GVA).

However, as greater operational efficiencies have evolved and the UK's manufacturing landscape has shifted, this figure has improved.

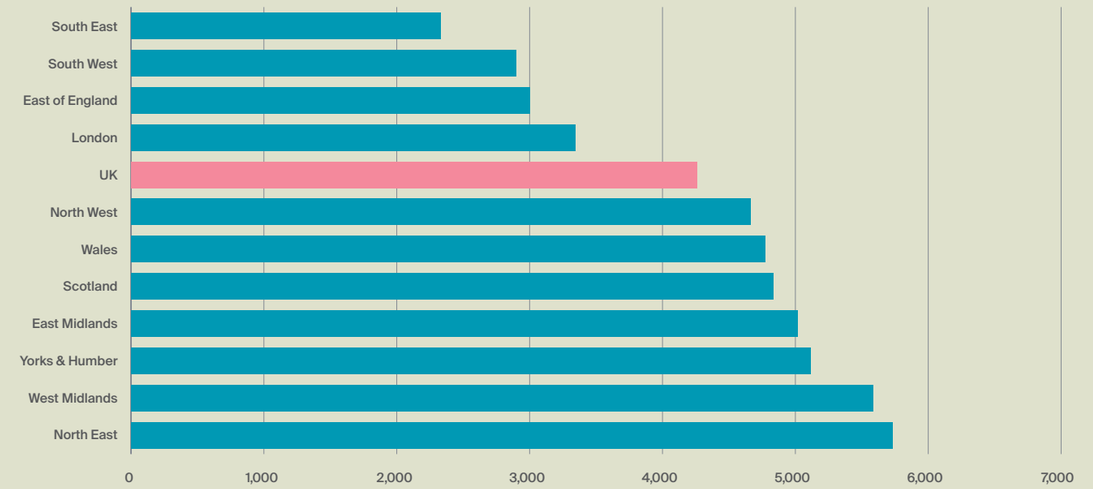
Ten years ago, there was approximately the same amount of floor space occupied by manufacturers as there is today. The total occupied floor space in 2014 was just 0.4% lower than it is now. However, over the past ten years (to 2023), manufacturing output rose 8.6%. The productivity of manufacturing floor space has improved by 9% in ten years, reflecting both improvements in productivity as well as shifts in terms of the composition of manufacturing.

The South East region has the highest levels of productivity and the smallest floor space per £million GVA. Here, £million of manufacturing GVA is generated with just 2,332 sq ft of industrial floor space. This is closely followed by the South West (2,896 sq ft), the East of England (3,003 sq ft), and London (3,346 sq ft).

The North East region has the lowest productivity rates – that is, the largest floor space per £million output. Here, it takes 5,728 sq ft of industrial floor space to generate £1 million manufacturing GVA. This is followed by the West Midlands, with 5,728 sq ft needed.

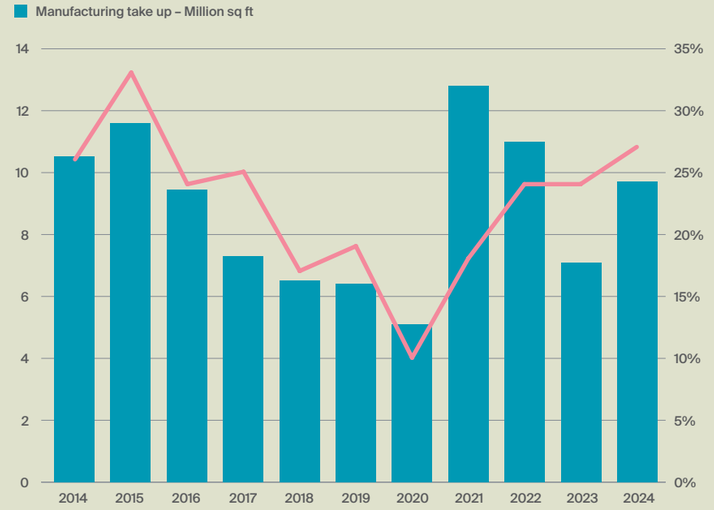
"The productivity of manufacturing floor space has improved by 9% in ten years, reflecting both improvements in productivity as well as shifts in terms of the composition of manufacturing."

Manufacturing productivity by region (sq ft per £m GVA)



Source: Knight Frank Research

Manufacturing take up of industrial and logistics space (units over 50,000 sq ft)



Source: Knight Frank Research

Productivity has improved over the past ten years, meaning the amount of floor space needed to generate each unit of output has reduced by 9%. We expect improvements to continue over the next ten years. That is, the amount of floor space needed to generate output will continue to shrink. Manufacturing output (GVA) is forecast to grow 12% over the next ten years (Oxford Economics). This growth in output could be closely matched in terms of productivity improvements, which would mean no net change in floorspace occupied by manufacturing.

However, the manufacturing landscape will continue to evolve. Some manufacturing sub-sectors will see growth, while others may see contraction, and improvements in productivity in existing sub-sectors may necessitate new or upgraded facilities.

The headline figures alone fail to offer indications of growth or areas of opportunity. We must dig into the sectors and locations where manufacturing sectors are expanding, and new sources of demand are materialising. The facilities needed by modern firms and nascent growth sectors are unlikely to be the same facilities that are being vacated by older, more traditional manufacturing sectors or by sectors facing decline. We must, therefore, explore these areas of growth in more depth to understand the opportunity.

"The headline figures alone fail to offer indications of growth or areas of opportunity. We must dig into the sectors and locations where manufacturing sectors are expanding, and new sources of demand are materialising."

"The facilities needed by modern firms and nascent growth sectors are unlikely to be the same facilities that are being vacated by older, more traditional manufacturing sectors or by sectors facing decline."

MANUFACTURING TAKE UP

While the total floor space occupied by manufacturers has not risen in the past ten years, there has been a great deal of change, with shifts in terms of the industries, the locations and the types of facilities and specifications. As a result, manufacturing firms have accounted for approximately a quarter of all take up of facilities over 50,000 sq ft in the last three years. Some sub-sectors of manufacturing have grown substantially, and this has been reflected in take up activity.

Over the past three years, manufacturers have taken up 28 million sq ft (units over 50,000 sq ft). And in 2024, manufacturing accounted for 27% of take up. Significant sub-sectors include aerospace and automotive manufacturing, as well as food manufacturing and advanced manufacturing and engineering firms. Take up by fabricators of semi-finished products and component parts (e.g. metals, plastics and rubber products) has also been an important segment of the market, with demand for these intermediate products stemming from growth in energy manufacturing, defence, and pharma as well as other sub-sectors.

Just over half of manufacturing take up in the past three years has comprised new facilities (units over 50,000 sq ft). As manufacturers increasingly look to improve productivity, and with the growth of new and nascent sub-sectors, we are likely to continue to see demand for new and often bespoke facilities continue.

The UK manufacturing landscape and its evolution

The largest manufacturing sub-division is food production, followed by motor vehicles and fabricated metal products (based on sales). The ordering of the top sectors is slightly different when measured in GVA (Gross Value Added), with basic pharmaceutical manufacturing rising up the rankings to third.

The largest sub-division, food production, represented 20.8% of total manufacturers' sales in 2023. However, as a relatively low-value manufacturing sector, the food manufacturing sector is less dominant when considered in terms of gross value add (GVA), accounting for just 12% of total manufacturing GVA.

On the other hand, higher value manufacturing sub-sectors such as basic pharmaceuticals and the computer, electronic and optical equipment sub-sectors each account for just 3% of sales but a much more significant share of manufacturing GVA, at 9% and 7%, respectively. Fabricated metal products also account for a higher share of GVA compared with sales, with a 9% of manufacturing GVA compared with a 7% of sales value. These higher GVA figures reflect higher productivity in these sectors.

> "Manufacturing also invests heavily in new technologies, with nearly half (47%) of total research and development (R&D) investment in the UK in 2022 made by manufacturers (Oxford Economics)."

UK's manufacturing landscape by sector based on GVA (2023)

Leather & related products <1%
Tobacco products <1%

Source: Knight Frank Research, ONS

MANUFACTURING'S CONTRIBUTION TO THE UK ECONOMY

The manufacturing sector accounted for 8.8% of total UK economic output (GVA) and 8.1% of employment (ONS, Q3 2024). The UK is currently the 12th largest manufacturing nation in the world and the sector directly contributed £217 billion in output to the UK economy in 2023, providing 2.6 million jobs (Make UK).

However, the sector's impact on the UK economy extends far beyond its direct contribution. According to estimates from Oxford Economics, the total impact of UK manufacturing on GDP was £518 billion in 2022, which is nearly a quarter (23%) of UK GDP. A key driver of this total is the reliance of UK manufacturers on a complex network of UK-based supply chains. The manufacturing sector also accounts for 34.5% of all UK goods and services exports.

Indeed, this is reflected in recent trends in occupier market activity, with firms specialising in the manufacture of intermediate products (such as metals, rubbers, and plastics) to be used in the manufacture of other final goods, and component goods manufacturers playing a significant role in take-up of space. UK-based manufacturing also results in demand for downstream services for the distribution and export of goods, thus positively impacting demand for distribution facilities.

Capital-intensive industries such as manufacturing engage in significant business investment activities. In 2022, business investment made by the manufacturing sector amounted to 15% of total business investment. Given that manufacturing accounts for a significantly smaller share of the economy (8.8% based on the most recent figures), this means that the manufacturing sector is considerably more capital-intensive than average. Manufacturing also invests heavily in new technologies, with nearly half (47%) of total research and development (R&D) investment in the UK in 2022 accounted for by manufacturers (Oxford Economics).

High levels of investment in R&D have implications for the facilities that manufacturers operate from and influence choices in terms of the specifications and customisation of these facilities. These investments also shape location choices, especially where R&D is co-located with production.

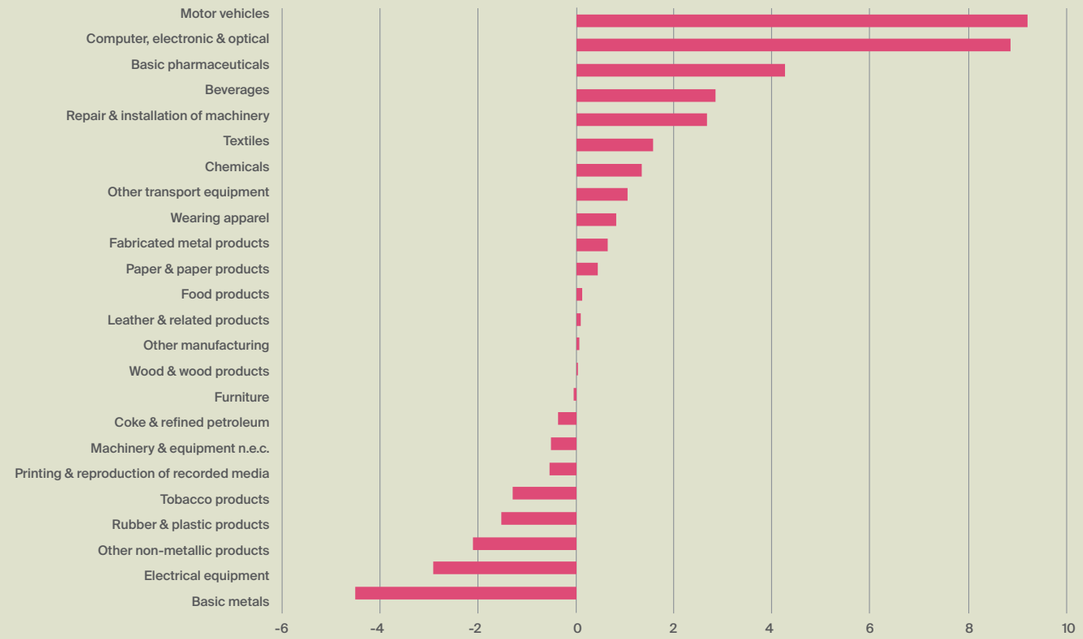
THE SHIFTING UK MANUFACTURING LANDSCAPE

Twenty years ago, the UK manufacturing landscape looked quite different to today.

One constant is the dominance of food product manufacturing, which has remained the largest manufacturing sub-division. Over the past ten years, the food and beverage sectors have expanded. The sectors (together with tobacco) accounted for 18% of manufacturing sales in 2013, compared with 26% in 2023. Food products, in particular, have seen strong growth, with growth in prepared meals and dishes being a key component in this growth. There has also been strong growth recorded in the beverage sector.

> "High levels of investment in R&D have implications for the facilities that manufacturers operate from and influence choices in terms of the specifications and customisation of these facilities. It also influences their location choices, particularly where manufacturing R&D is co-located with production."

Change in output in the past twenty years
Absolute change (£ billions, real)



Source: Knight Frank Research, ONS

The UK's motor vehicle manufacturing sector has recorded peaks and troughs throughout its history. Following contraction during the 1980s and 90s, the sector has seen a change in fortunes since the millennium. In the past twenty years, the manufacturing of motor vehicles has been the largest contributor to growth in manufacturing output in the UK, with output for the sector almost doubling.

However, despite the sector's rising output value (GVA), in terms of car production numbers, the trajectory has been one of decline, and in 2023, the UK failed to make the top ten list of leading car producers worldwide. The sector has faced several challenges in recent years due to the changing trade environment post-Brexit, as well as supply chain issues and inflationary pressures since the Covid pandemic. More than 70% of cars made in the UK are exported, with the EU and US being the two largest export markets. This means that the fortunes of the sector are closely tied to the global trade environment and, in particular, trade relations with the EU.

Basic pharmaceutical manufacturing has also recorded strong growth in the past twenty years, with a 30% growth in output (GVA). Sales from the manufacture of basic pharmaceutical products in the United Kingdom (UK) totalled £1.86 billion in 2023, compared with £777 million ten years ago. The UK has productive life sciences manufacturing clusters across the UK, and the sector has been an important driver for regional economic development. However, the sector has faced challenges, including capacity constraints, with the loss of 10,900 jobs in the past twenty years. In the past few years, the UK has also seen the global proportion of capital investment fall dramatically. Since 2010, the UK has fallen from 4th to 98th place in overall trade balance in pharmaceuticals due to fierce global competition. Many countries, including Ireland, France, and Germany, are also focused on growth in this sector (Source: ABPI).

The manufacture of fabricated metal products (except machinery and equipment), has expanded

> "In the past twenty years, the manufacturing of motor vehicles has been the largest contributor to growth in manufacturing output in the UK, with GVA for the sector almost doubling."

> "Northern Ireland and Wales were the two regions to record a contraction in manufacturing output over the past ten years. However, both these regions are expected to see strong growth in the next ten years."

in the past ten years, with a 40% rise in sales. This growth has been driven by various end uses, with the construction industry seemingly a key driver in demand, with robust growth in sales of metal structures and parts of structures, doors and windows and central heating radiators and boilers. However, another key component in the growth of this sector is the manufacture of weapons and ammunition, which has seen sales rise 70% over the last ten years.

The manufacture of computer, electronic and optical equipment has also seen rapid growth in the past twenty years, with a 152% rise in GVA since 2003. This sector covers three main sub-sectors: office equipment and computers, audio, video and telecom equipment, and medical, optical and precision instruments. In the past ten years, sales in navigational equipment, in particular, have recorded strong growth, as have sales of irradiation and electromedical and electrotherapeutic equipment. The sector is highly competitive globally and features a strong emphasis on R&D.

Sectors that have seen decline in the past twenty years include the manufacture of basic metals, with a 45% fall in GVA since 2003, the manufacture of electrical equipment, with a 34% decline and other non-metallic products (-25%).

In percentage terms, the largest decline has been in the manufacture of tobacco. The sector has witnessed a dramatic decline over the past thirty years and the last tobacco factory in the UK closed in 2016.

REGIONAL DIVISIONS

The changing manufacturing landscape across the regions reflects these shifts in sectors, as well as government policy. The region with the strongest growth in the past ten years (in terms of output) is the North East, with output rising 19.2% in real terms since 2013. This is followed by Yorkshire and the Humber and the South West regions, with output from both growing 15.4% over the same period, closely followed by the North West, with 15.0% growth recorded.

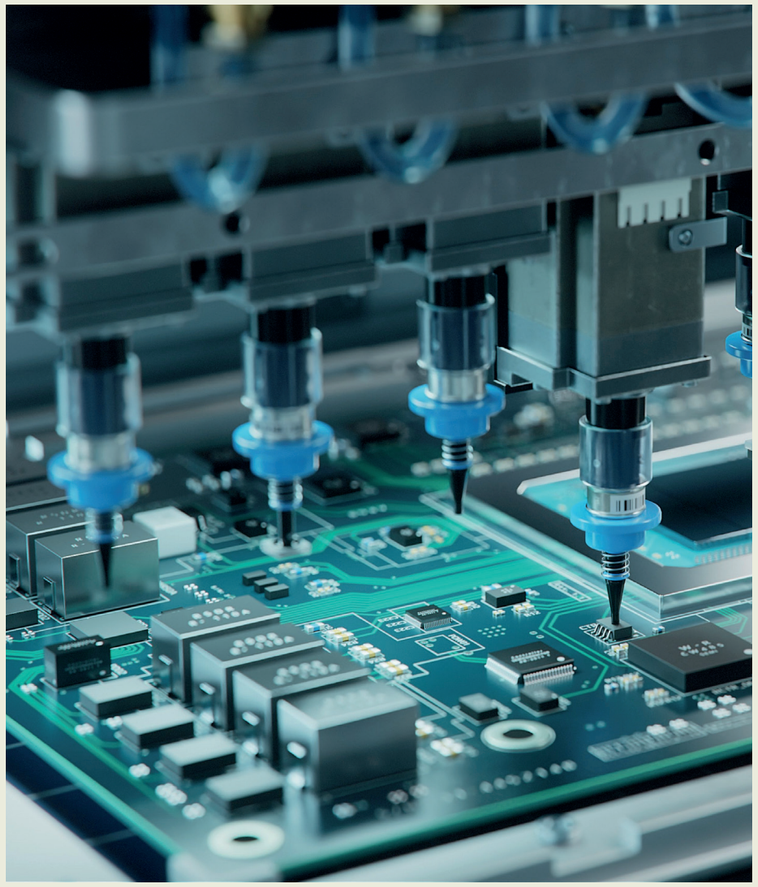
Northern Ireland and Wales were the two regions to record a contraction in manufacturing output over the past ten years. However, both regions are expected to see strong growth in the next ten years.

19.2%

The region with the strongest growth in the past ten years (in terms of output) is the North East, with output rising 19.2% in real terms since 2013.

How important is location?

For B2C distribution, location is business critical. Fast and effective distribution to the customer requires an efficient distribution network with strategically positioned



warehouse facilities. However, as we move upstream in the supply chain, location – relative to the customer – becomes less critical. Manufacturing firms are, therefore, seen as more footloose than distribution firms, often opting for locations considered less prime from a transport accessibility or consumer catchment perspective.

Heavy manufacturing operations often require a large footprint. They will, therefore, opt for locations where large facilities can be obtained relatively cheaply. However, they will still require staff, and the availability of labour is a key location decision. Locations that have land and labour in plentiful supply, are often keen to attract firms, and with higher-than-average wages, the manufacturing sector can be an attractive prospect. Tax incentives have been used as a tool to attract firms to specific locations through initiatives such as Enterprise Zones, Freeports, and Investment Zones.

LOCATION AND EDUCATION

Requirements for specialised skillsets can influence location decisions. Established industries typically locate in clusters to benefit from agglomeration effects, including access to a local workforce who have developed the necessary knowledge and skills. This can be seen in industry clusters such as the Automotive cluster in the West Midlands. The need for specialist skills has led to both private and public sector-led initiatives in apprenticeship and training programs, such as Jaguar Land Rover's JLR Academy. These academies can enable employers to customise training and education programmes for prospective staff and maintain their existing employee skill base.

Nascent manufacturing sectors tend to be concentrated in high-value production and rely on a highly educated workforce. Businesses often establish partnerships or collaborate with universities that have highly regarded engineering schools and offer highly regarded and specialist courses.

The research infrastructure and strong research credentials of universities can act as a magnet for both talent/students as well as industry.

> "Heavy manufacturing operations often require a large footprint. They will, therefore, opt for locations where large facilities can be obtained relatively cheaply. They will, however, require staff, and the availability of labour is a key location decision."

Investment Zones

The government has committed to establishing 13 Investment Zones across the UK. Each Investment Zone is focused on supporting the growth of at least one of the following priority sectors: advanced manufacturing, creative industries, digital and tech, green industries, and life sciences.

In 2023, eight areas in England were invited to co-develop an Investment Zone proposal with the government. These include the Greater Manchester Combined Authority (GMCA); Liverpool City Region Combined Authority (LCRCA); North East Combined Authority (NEC A); South Yorkshire Mayoral Combined Authority (SYMCA); West Midlands Combined Authority (WMCA); West Yorkshire Combined Authority (WYCA); East Midlands Combined County Authority (EMCCA); and the Tees Valley Combined Authority (TVCA).

In July 2023, **South Yorkshire** was designated as the UK's first Investment Zone, focusing on advanced manufacturing. Leveraging South Yorkshire's existing strengths, the zone emphasises sectors such as aerospace, clean energy, and health technologies. The University of Sheffield and Sheffield Hallam University are integral partners, contributing to innovation and skills development. An initial investment exceeding £80 million focuses on sustainable aviation technologies in collaboration with industry partners and the University of Sheffield's Advanced Manufacturing Research Centre (AMRC).

Plans for the **West Midlands Investment Zone** were approved last year (2024), and the gigapark at Coventry Airport will also receive a £23m investment to attract businesses. Alongside the Coventry-Warwick gigapark, with a proposed gigafactory, the Birmingham Knowledge Quarter will receive a £9m investment, while the Wolverhampton Green Innovation Corridor is also set to receive £7m as part of the scheme. The 25-year zone is focused on growth in areas such as advanced manufacturing, greener industries and underlying technologies.

Investment Zones are now being focused on growing knowledge-based clusters and innovation districts, which can become homes to highly productive, research-intensive businesses.

Nascent manufacturing sectors tend to be concentrated in high-value production and rely on a highly educated workforce. Businesses often establish partnerships or collaborate with universities that have highly regarded engineering schools and offer highly regarded and specialist courses.

CO-LOCATION OF R&D AND MANUFACTURING

Research and development functions will be particularly important for businesses focused on high-value manufacturing. Bringing together R&D and manufacturing will not always work due to the different requirements – in terms of operational costs and labour needs. However, there can be advantages for high-value manufacturing. Co-locating research and development (R&D) with manufacturing operations can promote innovation and accelerate product development.

An example of this integrated approach includes the Materials Innovation Factory (MIF) based in Liverpool. The MIF is an £81 million state-of-the-art facility located at the University of Liverpool campus, founded as a strategic partnership between the University, Unilever and UK Research and Innovation (UKRI) as an international centre for advanced materials excellence and expertise.

Case Study

Advanced Manufacturing Park (AMP), Rotherham and the University of Sheffield's Advanced Manufacturing Research Centre (AMRC) location preferences of manufacturers.

The Advanced Manufacturing Park (AMP) in Rotherham has become an international hub of industrial collaboration. Located just two miles from Sheffield city centre, the park was developed on the former Orgreave colliery and coking works site which closed in 1990, the AMP benefits from Government enterprise zone status within the Sheffield City Region. The park sits at the heart of one of Europe's most important Advanced Manufacturing and Engineering clusters and is home to some of the world's largest manufacturers.

Nearly 100 companies are located on the AMP including Nuclear AMRC (a Westinghouse, Areva, Sheffield Forgemasters joint venture), The Advanced Manufacturing Research Centre (AMRC), a Boeing / University of Sheffield partnership; Rolls-Royce and McLaren Automotive – McLaren's new technology centre opened in October 2018 to specialise in the research and production of carbon fibre tubs. Both the University of Sheffield's Advanced Manufacturing Research Centre (AMRC) and Nuclear AMRC form part of the High Value Manufacturing Catapult; a consortium of leading manufacturing and process research centres across the UK.

Building on Sheffield's long history of metalworking expertise and innovation, the University of Sheffield's Advanced Manufacturing Research Centre (AMRC) is providing the next generation of manufacturing sectors with the skills and technology to meet the demands of the future. The AMRC provides specialist capabilities from design and prototyping to additive manufacturing and structural testing in a range of industrial sectors from aerospace and automotive engineering to medical device development and works with industrial partners from small start-ups to global giants such as Boeing and Rolls-Royce. Technology developed at the AMP is already being used in leading edge applications including Formula One, the military and commercial aircraft.

As part of the Nuclear AMRC, the UK Atomic Energy Authority (UKAEA) also joined the AMP in 2020, taking up a new 22,300 sq ft research facility at the park. The facility is being used to support the UKAEA's research and development in to the commercialisation of nuclear fusion as a source of sustainable energy and has created around 40 high-skilled jobs.

The park has become a magnet for companies, driving regional economic growth and job creation. The Advanced Manufacturing Park (AMP) in Rotherham and the University of Sheffield's Advanced Manufacturing Research Centre (AMRC) exemplify the dynamic partnership between research and advanced manufacturing. These collaborations showcase how university-industry partnerships foster mutual benefits, reinforcing the connection between academic innovation, manufacturing investment, and the strategic location preferences of manufacturers.

The future of UK manufacturing

Growth in UK manufacturing output is expected to accelerate over the next ten years. Oxford Economics forecasts the sector to expand 12.0% by 2033, which represents a change in gear for the sector when compared with growth of 8.6% over the past ten years.

The sectors with the strongest growth prospects are the manufacturing of other transport equipment, computer electronic and optical equipment, and the manufacture of basic pharmaceuticals. All are expected to see output rise by 20% or more over the coming decade.

The manufacture of 'other transport equipment' division includes transportation equipment such as shipbuilding and boat manufacturing, railroad rolling stock and locomotives, air and spacecraft, and their parts. Growth in this sector has been robust in the past ten years, and strong growth is expected in the next ten years. There are several reasons for the robust growth forecast in this sector, including rising defence spending and increased demand from the commercial aviation sector.

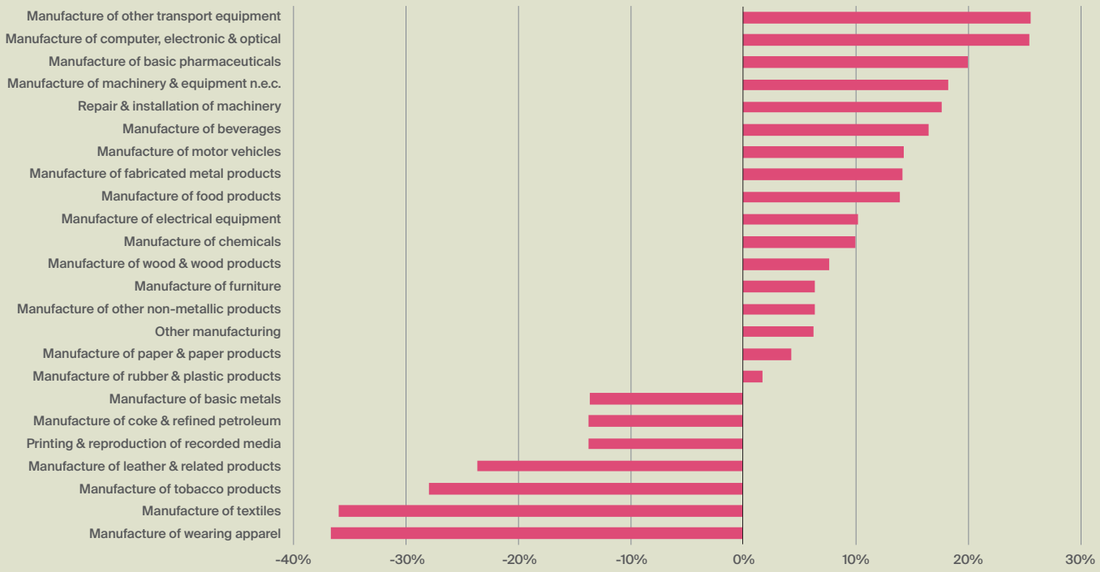
The manufacture of computer electronic and optical comprises the manufacture of computers, computer peripherals, communications equipment, and similar electronic products. It includes the manufacture of semiconductors and other components for electronic applications. These technologies have numerous and varied end uses, including consumer electronics, communications equipment, scientific, laboratory and medical equipment, navigation and aviation equipment, and various defence applications. Increased demand from defence and aviation sectors, along with growth in the scientific, laboratory and medical R&D sectors, are key drivers for growth in this sub-sector.

> "Growth in UK manufacturing output is expected to accelerate over the next ten years."

The manufacture of basic pharmaceuticals is another sector expecting strong growth (+20%) in the next ten years. This sector includes the manufacture of medicaments, vaccines, medical diagnostic preparations and biotech pharmaceuticals. However, it excludes research and development for pharmaceuticals and biotech pharmaceuticals. This sector experienced strong growth in 2020, during the outbreak of the Covid pandemic, with output rising from £13.8 billion (in 2019) to £16.5 billion, followed by another increase in 2021 to £17.3 billion. Robust growth is expected to continue, as the pandemic highlighted the sector's critical nature and the need for secure, domestic capabilities for research, development and production of vaccines, medicines, and other medical supplies.

However, not all sectors are expected to expand. The largest contractions (in percentage terms) are forecast for the manufacture of textiles and wearing apparel.

Manufacturing 10-yr growth forecast by sub-sector
%



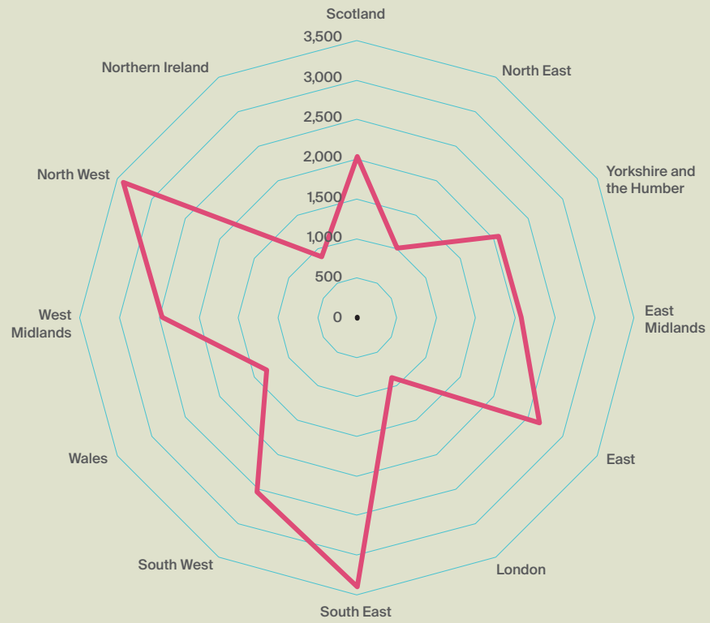
Source: Knight Frank Research, Oxford Economics

REGIONAL GROWTH PROSPECTS

Of course, regional prospects for manufacturing are heavily influenced by the composition of manufacturing within these regions and the varying outlooks for different sub-sectors.

The strongest growth (in percentage terms) is expected for Northern Ireland. However, the anticipated growth will still fall short of offsetting the negative growth recorded over the past ten years. Northern Ireland also has the smallest manufacturing output of any of the UK regions, and in absolute terms, the growth expected here falls short of all other regions, except of London.

Manufacturing growth forecast – 10-year growth in output by region
£million GVA



Source: Knight Frank Research, Oxford Economics

The South West is also forecast to see strong growth in manufacturing, with 14.3% growth by 2033. This builds upon the strong historic growth enjoyed by the region since 2013. The South East region also anticipates robust growth in manufacturing over the next decade.

Scotland, the East of England and Wales, have recorded weak or negative growth in the last ten years, but this trend is expected to reverse, with robust growth forecasts for the coming decade.

SECTOR AND REGIONAL GROWTH HOTSPOTS

The North West region features prominently in the list of growth hotspots, with multiple sectors in the region expected to expand significantly. These include other transport equipment, basic pharmaceuticals, and motor vehicles, highlighting the region's diverse manufacturing base across several high-growth sectors.

The West Midlands appears three times in the list, with strong growth prospects across several well-established, traditional manufacturing sectors, including motor vehicles, fabricated metals and machinery and equipment. The East region also appears three times, with strong growth forecasts for pharmaceuticals, computer, electronic and optical equipment and machinery & equipment manufacturing.

The South West region appears twice within the top ten, with hotspots of growth in high value sectors; other transportation equipment and the computer, electronic and optical sector division.

Yorkshire & Humber appears twice within the top twenty list with growth in the food manufacturing sector as well as in fabricated metals manufacturing.

Northern Ireland, Wales, the North East and London regions don't have any growth sectors within the top 20 hotspots list. The hotspots are based on absolute growth rather than percentage growth and their absence reflects smaller industrial bases compared with other regions.

TOP GROWTH SECTORS AND REGIONAL PROSPECTS

The top three growth sectors within manufacturing are other transport equipment, computer electronic and optical, and the manufacture of basic pharmaceuticals. The regions expected to benefit most from the expansion of these growth sectors are the North West, South East and South West.

14.3%

The South West is also forecast to see strong growth in manufacturing, with 14.3% growth by 2033.

The top three growth sectors within manufacturing are other transport equipment, computer electronic and optical, and the manufacture of basic pharmaceuticals.

The South West region is expected to be the main beneficiary of the growth in Other transport equipment manufacturing. This is followed by the North West and East Midlands regions.

Growth in the Computer, electronic & optical sub-sector will impact the South East region most, with output expected to increase by almost £1 billion in this region by 2033. The South West is another region that is expected to benefit from growth in this sector, as is the East of England region.

Top 20 Hotspots of forecast manufacturing growth
By region and sector

Rank	Region	Sector
1	South East	Computer, electronic & optical
2	South West	Other transport equipment
3	North West	Other transport equipment
4	North West	Basic pharmaceuticals
5	North West	Motor vehicles
6	West Midlands	Motor vehicles
7	South West	Computer, electronic & optical
8	East Midlands	Food products
9	East	Basic pharmaceuticals
10	East	Computer, electronic & optical
11	Yorkshire and the Humber	Food products
12	East	Machinery & equipment n.e.c.
13	South East	Basic pharmaceuticals
14	East Midlands	Other transport equipment
15	Scotland	Beverages
16	North West	Food products
17	West Midlands	Fabricated metal products
18	Scotland	Basic pharmaceuticals
19	West Midlands	Machinery & equipment n.e.c.
20	Yorkshire and the Humber	Fabricated metal products

Source: Knight Frank Research, Oxford Economics

> "The regions expected to benefit most from the expansion of the top three growth sectors are the North West, South East and South West."

The North West region will drive expansion in the basic pharmaceuticals manufacturing sector, with regional output increasing £709 million by 2033. There is also robust growth anticipated in the East of England, the South East, as well as Scotland and the North East.

AEROSPACE AND DEFENCE MANUFACTURING

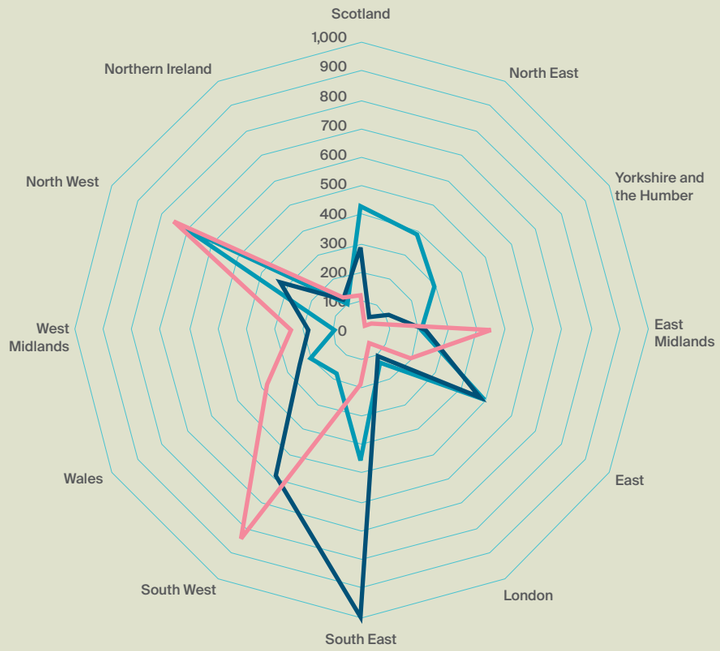
The United Kingdom's defence manufacturing sector is a pivotal component of both national security and economic prosperity. It encompasses a wide array of industries, including aerospace, naval shipbuilding, and advanced weaponry systems. The sector not only equips the nation's armed forces but also significantly contributes to the economy through exports and job creation.

In the forecasts for output (GVA), the expansion of the aerospace and defence manufacturing sector is evident within the 'other transport equipment' manufacturing division, which includes the manufacture of air and spacecraft and their parts, as well as in the 'computer, electronic and optical products' division. These two manufacturing divisions both have strong growth prospects over the next ten years, and along with pharmaceutical manufacturing, are the top sectors for expansion.

The defence industry is positioned for significant growth. Heightened global tensions and ongoing conflicts have shifted attention toward strengthening defence priorities. Consequently, defence spending is expected to match or surpass inflation, fuelling innovation and advancements in modernisation within the sector.

The Government's Manifesto stated that it would "bring forward a defence industrial strategy aligning our security and economic priorities". Ensuring a strong defence sector and resilient supply chains, including steel, across the whole of the UK. Notably, 68% of defence spending with UK industry occurs outside London and the South East. It can, therefore, play a key role in a regional growth strategy.

Manufacturing growth forecast – 10-year growth in output by region
£million GVA



Source: Knight Frank Research, Oxford Economics

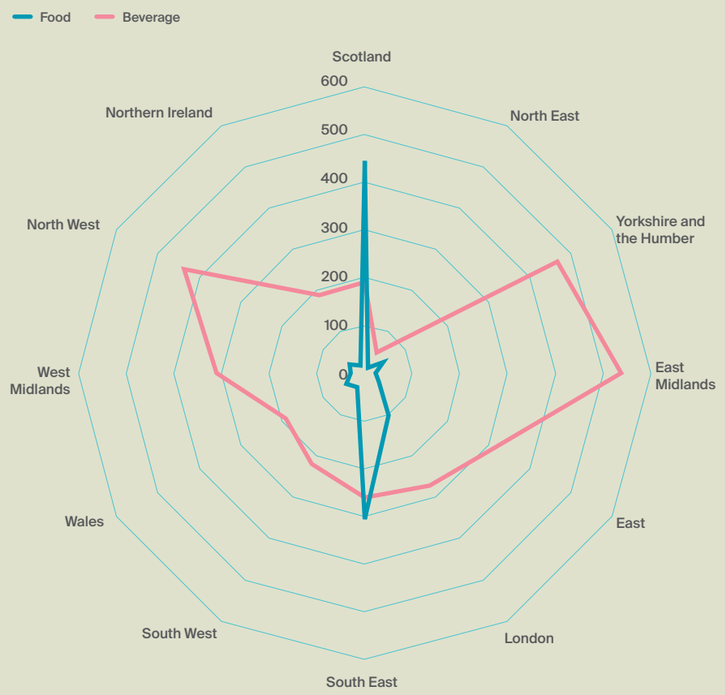
The United Kingdom's defence manufacturing sector is a pivotal component of both national security and economic prosperity. It encompasses a wide array of industries, including aerospace, naval shipbuilding, and advanced weaponry systems.

We have seen the growth, investment and modernisation in the sector driving take up of both new and existing facilities across the UK. For example, in Q4 2024, BAE Systems agreed to take the 96,000 sq ft Unit 5 at PLP's Bessemer Park in Sheffield for a new artillery and development facility. Earlier in the year, a semiconductor factory in the North East was acquired by the Ministry of Defence. Specialist semiconductors are used in a number of military platforms, including to boost fighter jet capabilities. This acquisition was made to safeguard the future of the facility, which is critical to the defence supply chain and major military programmes and exports.

In the commercial aviation sector, the demand for aircraft continues to outpace production capacity, resulting in a backlog equivalent to 14 years of current production. This compares to an average pre-pandemic backlog of around six years (2013 and 2019). There is also significant growth potential for the industry as demand expands across global markets, particularly in Asia Pacific and Middle East markets as well as in Africa. Furthermore, the emerging space sector also presents substantial opportunities for the aerospace and defence sector.

The UK's aerospace industry is the second-largest globally, with an annual turnover of around £30 billion. The sector employs a substantial workforce and contributes significantly to exports.

Food and beverage manufacturing sectors - 10-year forecast growth in output by region
£million GVA



Source: Knight Frank Research, Oxford Economics

FOOD AND BEVERAGE MANUFACTURING

The manufacturing of food products is the UK's largest manufacturing sub-sector. It accounts for 12% of total manufacturing output (GVA), or c.£3.4 billion. Beverage manufacturing is worth less, at c.£1.1 billion, but there are strong growth prospects for both sub-sectors over the next ten years.

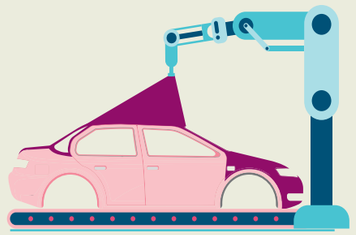
The region where the expansion of these sectors will drive the most growth is Scotland, with an additional £637 million expected by 2033 across the two sectors combined. This is followed by the South East, the East Midlands and the Yorkshire & Humber regions. In Scotland, growth in beverage manufacturing will be the key driver, which is dominated by the manufacture of Scottish Whiskey.

MOTOR VEHICLE PRODUCTION

The UK's automotive industry has been the largest contributor to growth in manufacturing output over the past twenty years, and robust growth is expected over the next decade. Growth in this sector will be focused in the North West and West Midlands regions, both of which have existing automotive manufacturing clusters.

Given the importance of the export market for UK car production, the importance of the global trade environment cannot be overstated, especially the trade relationship with the EU, which remains by far the most important market for UK car makers, accounting for more than half of UK car exports in the first half of 2024. On a regional basis, car manufacturing in the East Midlands and the North East regions are particularly dependent on the EU export market, while for the West Midlands, other (non-EU) export markets are more crucial.

While the outlook for the ten-year horizon is positive, recent performance in the sector has been weak, and there are risks to the outlook. Across the global automotive industry, restructuring is taking place as manufacturers transition from combustion engines to EV (electric vehicle) production, leading to plant closures, including in the UK. In 2024 (January to November), UK car output fell by -12.9%, 108,787 fewer than the same period in 2023 and almost half a million short of 2019 volumes.



The UK's automotive industry has been the largest contributor to growth in manufacturing output over the past twenty years, and robust growth is expected over the next decade.

UK automotive manufacturing is well placed to benefit from the ongoing shift toward greater adoption of electric vehicles, as recent investment announcements in EV and battery production testify. However, with the EV market not growing as fast as expected and headwinds to the global trade policy environment, there are downside risks to the growth forecasts.

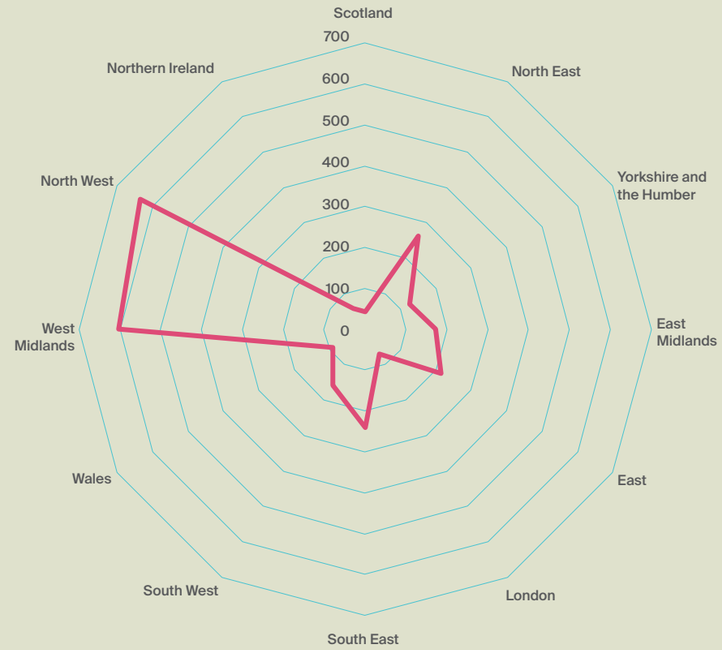
CONCLUSION

Manufacturing output is forecast to grow 12% in the next ten years. This compares with 8.6% growth over the past ten years. Productivity gains in the past ten years (c.9%) have meant that floor space occupied by manufacturers has changed very little. However, expansion of existing sectors, growth of new and emerging sectors and firms seeking to upgrade (or simply relocate) facilities have driven a significant amount of take up in the industrial and logistics sector in recent years. While productivity gains are likely to continue, the accelerating growth, coupled with ongoing shifts in terms of the composition of the sector, will mean new sources of demand with shifting requirements.

Growth in the sector will be driven by advancements in key sectors such as aerospace and defence, pharmaceuticals, and high-tech electronics. Regional manufacturing hotspots, particularly in the North West, South West, and South East, highlight the diverse strengths of the UK manufacturing capabilities, from transport equipment to semiconductors.

The sector will continue to face challenges, including the need to bolster supply chain resilience, adapt to geopolitical shifts, and navigate the evolving global trade environment. A comprehensive, long-term industrial strategy, with a focus on innovation and regional development, will be essential for the UK to sustain growth and capitalise on emerging opportunities in an increasingly competitive global market.

Manufacturing growth forecast – 10-year growth in output by region
£million GVA



Source: Knight Frank Research, Oxford Economics

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