

Understanding the recent accelerating decline of the UK Chemicals Sector

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Executive Summary

Chemicals underpin key sectors including food and drink, pharmaceuticals, agriculture, defence and the green economy, while also providing high value-added jobs. However, the UK chemicals sector is experiencing an accelerating decline with significant implications for productivity, trade, supply-chain resilience and national security. Since 2020, the sector's real GVA has fallen by nearly 40% while the trade deficit for Chemicals has increased by more than five-fold. Crucially, evidence from the NAEI and Companies House indicates a rising closure of plants and firms.

While there is a significant variation in the performance across subsectors of the Chemicals industry, the most concerning closure trend is in the higher value-added Other chemical products subsector, where the UK until recently had retained competitive strengths. This competitive advantage is deteriorating for a combination of reasons including high electricity costs, rising regulatory burdens, weakening domestic supply chains, ageing assets and unfair trade practices related to Chinese overcapacity and dumping.

Industry and government need to work together to address these pressures for the UK to maintain a competitive advantage in the downstream specialty chemicals sector. This would prevent further negative productivity shocks, the loss of strategically important manufacturing capability, as well as increasing national resilience across life-maintaining supply chains.

Introduction

The Chemicals sector is a critical component of the modern economy. Without chemicals most economic sectors would not be able to function.

The food and drinks sector relies on preservatives like sodium benzoate, acidity regulators such as citric acid, and sanitation agents like sodium hydroxide. The pharmaceutical industry relies on solvents like Acetone, Ethanol, Methanol, and Isopropanol as reaction media, and for purification and formulation processes. The agriculture sector is dependent on fertilizers that contain Urea, Ammonium Nitrate, Phosphoric acid and crop protection active ingredients. Concentrated nitric acid is required for the manufacture of propellants needed for our national defence in an increasingly dangerous world, and battery ingredients including lithium compounds and graphite are needed to power the new green economy.

The manufacture of chemicals has a high value-added per hour, too. This matters for growth and for good jobs. Higher value-added sectors pay higher wages and the value added per hour for the sector is almost twice that of the UK economy.¹ This means that when high value-added sectors such as Chemicals begin to decline, it results in a negative productivity shock where

¹ The last annual data available from ONS was for 2022: £79 for Chemicals vs £44 for the whole economy

high value-added jobs are replaced by lower value-added ones, causing the UK economy to become less productive.

The UK Chemicals sector is currently experiencing a significant decline in its performance as displayed in Chart 1. Since 2020, the real GVA of the sector has fallen by 38% and is almost back at 2006 levels while its share of the economy has fallen from 0.7% in 2020 to just 0.4% in 2025. Furthermore, the trade deficit with the rest of the world has jumped by more than five-fold since 2020. This decline has not gone unnoticed with the Sky News journalist Ed Conway releasing [a video](#) on the decline of the sector.

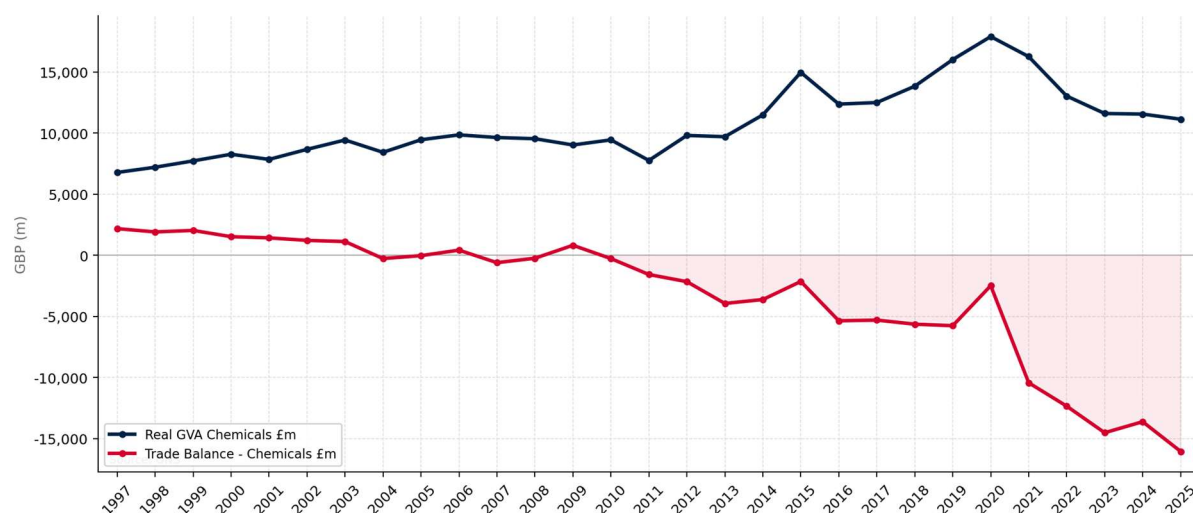


Chart 1: UK Chemicals sector: Real GVA and Trade balance (Source: ONS)

The decline in the competitiveness of the UK Chemicals sector has been impacted by a whole host of different drivers that were cited in a 2025 report by the [Centre for Sectoral Economic Performance](#). These include uncompetitive electricity costs, a jump in the cost of regulation given that UK firms had to spend billions to comply with UK REACH, complex environmental reporting and taxation, and the negative snowballing effect of firms exiting the domestic supply chain. For example, when a UK plant for ammonia shuts down, it cuts off the domestic supply of by-products like carbon dioxide and nitric acid making UK end users less competitive. Finally, the global trading system is being increasingly impacted by the dumping of Chinese chemical products as a result of massive excess capacity. This concern has also been raised across the EU with the governor of the Central bank of Belgium highlighting concerns about the decline of the Antwerp chemicals cluster.²

In this short paper we attempt to understand the rate and extent of firm and plant closures using two different datasets. The increasing rate of closures raises serious questions on the future of the sector that industry and government need to address to maintain growth and national resilience.

² Eurosclerosis 2.0 in a Changing World: From Repetition to Rupture, P. Wunsch & G. Langenus (2026)

Data on the closing of companies

We compare two data sets for the closure of chemicals companies. The first data set is the National Atmospheric Emissions Inventory (NAEI) data which provides information on atmospheric point-source emissions of pollutants (e.g., CO₂, CH₄, lead, nitrous oxide) over time for firms and their active sites that require an environmental license to manufacture. The second is the Companies House database which includes all firms such as sales and distribution offices - not just manufacturing firms.

Chart 2 contains NAEI data for the number of dissolved plants and dissolved plants as a percentage of active manufacturing firms. It shows the sector experiencing a large wave of plant closures between 2006 to 2008. These plant closures were largely bulk chemicals which have a lower value-added. This is why despite the high number of plant closures, its effect on the GVA of the sector was less significant. This observation also highlights the importance of the higher value-added downstream chemicals sector that produces the high-performance chemicals needed by the key advanced manufacturing sectors of the UK economy such as aerospace, biopharma, automotive, cosmetics, electronics, industrial equipment and defence.

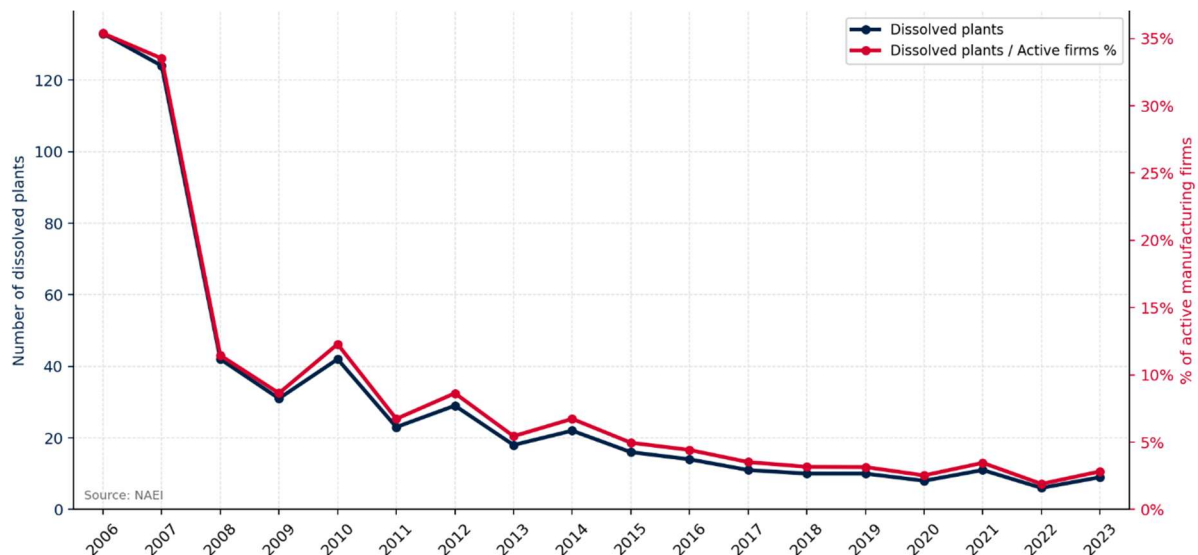


Chart 2: NAEI - dissolved plants

The reasons for the closure of bulk chemicals have been cited by the Institution of Chemical Engineers [here](#) noting that rising energy prices and the fragmentation of Imperial Chemical Industries (ICI) no longer made these plants globally competitive. Hence firms chose to build new bulk plants in the Middle East close to cheap feedstocks and in China to serve increasing demand there. Given the fall in GVA since 2020 it is notable that the low of manufacturing plant closures as a percentage of active firms was 1.9% in 2022 rising to 2.8% in 2023.

One challenge with using this data is that while it provides comprehensive data on manufacturing plants, there can be lag of at least 2 years between a plant stopping production and the license being revoked which is what the NAEI data measures. Following the closure of the plant, the firm must remove all hazardous material before providing a detailed site condition report. The firm then submits its application to surrender the permit followed by a review of the site and associated documentation by the regulator. Hence the low of 1.9% is more likely to

dovetail with the peak of the real market GVA in 2020. Given this lag from closing production to revoking the license it is helpful to also look at the Companies House database.

While the SIC 20 code covers all UK chemical manufacturers, the data also includes many firms that are not manufacturers but are instead involved in the sales and distribution of chemicals. This is also indicated by the significantly higher number of Companies House firms compared to NAEI firms under SIC 20. Our analysis of the data suggests that less than 5% of the firms categorised in SIC 20 are fully fledged manufacturers. Hence the Companies House data captures a much larger proportion of the chemicals supply chain than the NAEI dataset.

Chart 3 using Companies House data shows the ratio of chemicals companies closing as a percent of all chemical firms doubled from just under 6% in 2020 to 12% in 2025.

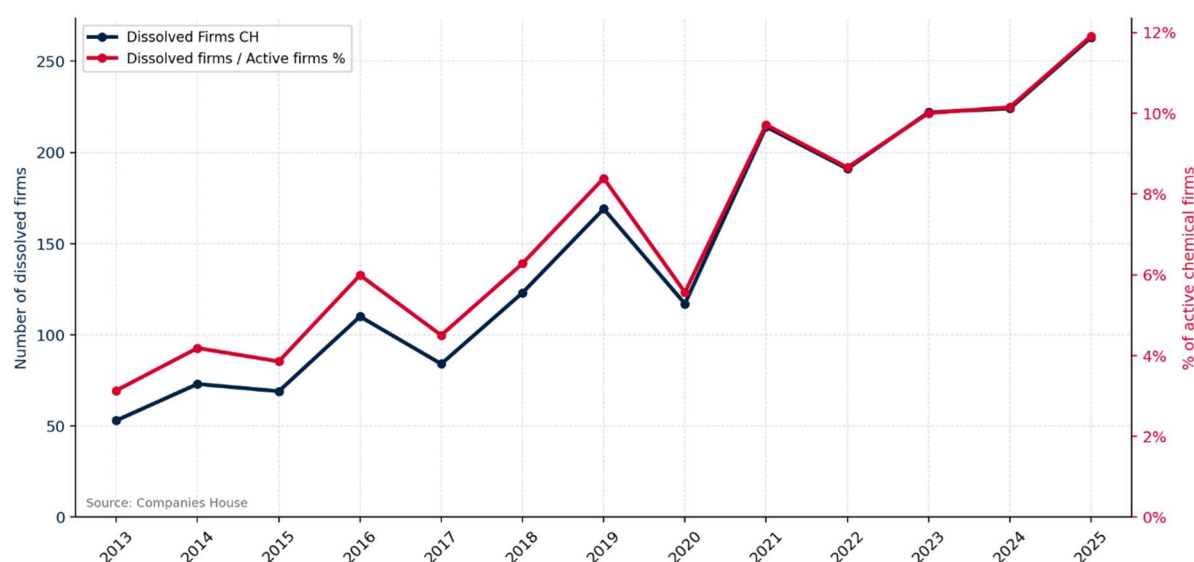


Chart 3: Companies House - dissolved chemical firms (SIC:20 division)

One possible explanation for the rise in the closure rate of Companies House firms is that the sales and distribution of UK chemicals has been negatively impacted by cheaper imports via bulk distributors. This may have led to local sales and distribution firms being unable to offload their inventory without resulting in a margin crunch and the potential demise of the firm. Although the data does not indicate that Specialty Chemicals manufacturers have recently shut down, it does suggest that UK speciality chemicals firms are losing competitiveness if the more sensitive sales and distribution firms are going out of business.

The Companies House data highlights the accelerating closure of UK chemical firms alongside the significant decline in GVA and the worsening trade balance. If the lagged 2020 figure for NAEI manufacturing firms is indeed a floor, then the observed rising rate of Companies House closures is likely to be accompanied by future rising rates of chemical companies revoking their license to manufacture.

Heterogeneity of the sector

The Chemicals sector is heterogeneous with different kinds of products serving different end users. Hence it is critical to understand whether there are certain parts of the chemicals sector that are faring worse than others.

To explore this issue, we break down the GVA and trade balance data by subsector. Although the datasets do not map against each other precisely, the mapping in Table 1 is reasonable given the objective is to understand broad trends across subsectors.

While the real GVA of the overall sector fell by 38%, Petrochemicals and in particular Other chemical products have fared worse falling by 58% and 70% respectively. The decline in the production of bulk Petrochemicals is unsurprising given the general shift out of this subsector since 2006. It also accounts for the bulk of the decline in the trade deficit given the ongoing domestic demand for these products. However, the decline in Other chemical products which have a higher value-added than Petrochemicals and tend to require smaller manufacturing runs which has been more suited to UK production, is a new trend.³

Table 1: Chemicals Subsector performance (ONS)

SIC Subsector	Fall in Real GVA 2020-2025	Export Mapping	Trade Balance 2020-2025, £
20 Manufacture of chemicals and chemical products	-38%	5 Chemicals	-13.6bn
20A Industrial gases, inorganics and fertilisers	-29%	52 Inorganic chemicals + 56 Processed fertilisers	-1.0bn
20B Petrochemicals	-53%	51 Organic chemicals + 57 Plastics in Primary Forms + 58 Plastics non-primary	-8.5bn
20C Dyestuffs, agro-chemicals; 20.3 Paints, varnishes, coatings	-20%	53 Dyeing, tanning & colouring materials	-0.2bn
20.4 Soap, detergents, cleaning preps, perfumes & toilet preps	-19%	55 Toilet & cleansing preparations	-2.2bn
20.5 Other chemical products	-70%	59 Other chemicals	-1.7bn

To ascertain whether there is any potential relationship between closures and the deteriorating trade balance, we have looked at the closures of firms from the Companies House data by subsector. (Chart 4). The ongoing decline of the petrochemicals sector can be observed, and while the closure rates of Industrial gases, inorganics and fertiliser firms have jumped, the sector has experienced a relatively slower decline in GVA and the trade balance. However, there is clearly cause for concern for the Other chemical products subsector given the rise and the level of closures. Furthermore, these closures are in a subsector where the UK had until recently retained a competitive advantage.

³ Using ONS ABS data Value-Added/Revenue is 26% for Other Chemicals generate compared to 23% for Industrial gases and Petrochemicals (20 A & 20 B)

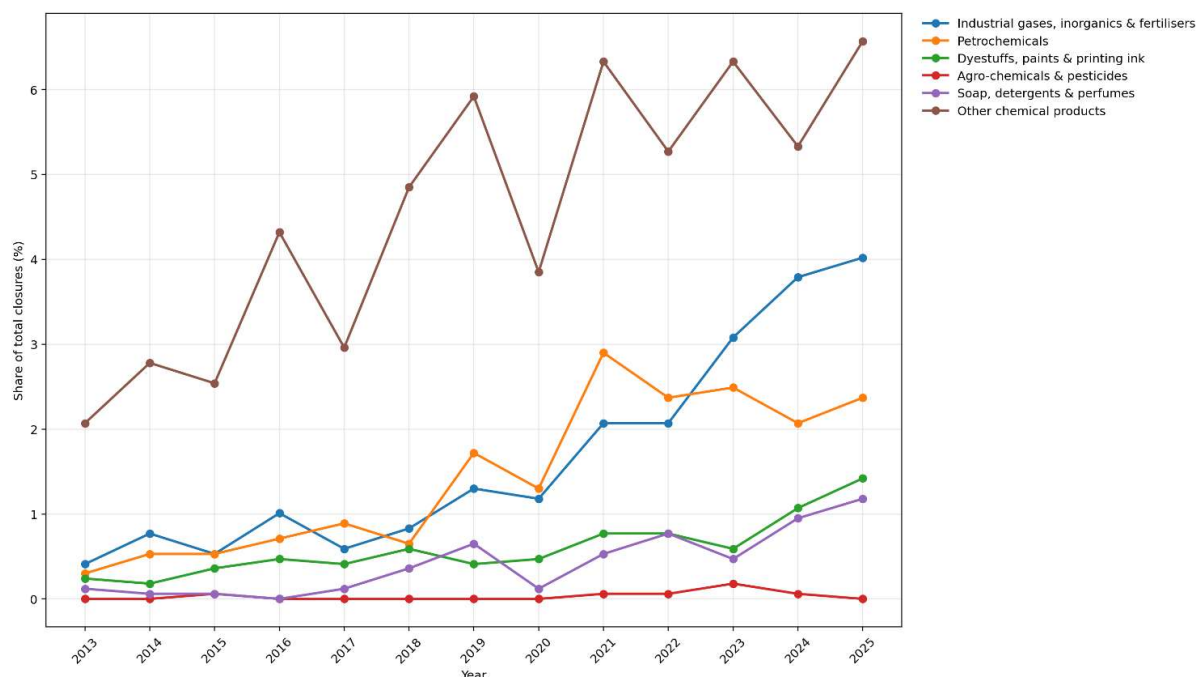


Chart 4: Trend of dissolved companies by trade category (Companies House)

The significant fall in GVA, the worsening trade balance and the rise in closures for the Other chemical products subsector raises concerns on the future of this high value-added cluster of firms. To provide further insights into the trade balance of this subsector we disaggregated the trade data by major trading bloc to see if there were any underlying trends. The analysis in Table 2 indicates that China has been the major beneficiary of the decline in the UK Other chemical products subsector.

Table 2: Other Chemicals UK Trade balance by trading bloc (ONS)

Other Chemicals - Trading Bloc	Trade Balance 2020-2025, £
United States	-180m
European Union	-427m
China	-824m

Drivers of closures

As noted above, the drivers of the UK's declining competitive advantage are reasonably well understood, which CSEP explored in its previous [report](#). The report also highlighted that large portions of the UK asset base are coming to the end of their life. But for firms to continue to invest in the next generation of plant, the factors that have driven these closures need to be understood and resolved as part of an industry wide plan.

These include addressing high electricity costs, ensuring that supply chain relationships remain strong, reducing regulatory costs, and addressing concerns of unfair trade and dumping. Unless, these are addressed, the sector will continue to decline resulting in further negative productivity shocks to the UK economy.

With regards to trade with China, [a recent OECD report](#) has highlighted the wave of subsidies including tax concessions and subsidised finance that have gone into the Chinese industrial base. These are clear infringements of the spirit of the liberal global trading system and are increasingly undermining the economies of liberal democracies.⁴ The industry in China is dominated by large state enterprises with heavy debt to asset ratios and “poor standalone credit ratings and large implicit guarantees from their government shareholders.” This approach has created a glut of domestic chemicals capacity resulting in firms selling the excess into global markets at below production prices in order to maintain ongoing production.

President Trump retaliated to this Chinese overcapacity in April 2025 with a 34% tariff on [Chinese chemical imports](#). This subsequently [fell to 25%](#) following the US Supreme Court’s landmark ruling which stripped the executive branch of its power to use emergency statutes for border taxes. Following the recent decision by the Office of the United States Trade Representative to impose section 301 tariffs on forced labor imports, this has risen to 37.5% due to [an additional 12.5%](#).

This elevated level of tariffs forced China to seek other markets including Europe to dump their products in order to maintain sales. The EU has imposed anti-dumping duties on specific imported chemicals from China including 122.8% on [phosphorous acid](#) and up to 42.3% on Adipic Acid. It is now exploring ways to potentially follow the US and [impose sector wide duties](#).

The UK has typically followed the anti-dumping approach to target specific chemicals and firms within the WTO framework via the Trade Remedies Authority. [It levied a 14.79%](#) tariff for the Zhuoyue Group and non-sampled cooperating exporters, but 54.64% for all other Chinese biodiesel firms. This is because UK firms were being forced out of business by [Chinese dumping](#). To date the UK has not made any comment about pursuing sector-wide remedies.

Given the UK still has areas of strength in the downstream speciality chemicals sector, it needs to act fast to address the decline in this sector including measures to protect UK firms from Chinese dumping. The drafting and implementation of an action plan by the chemicals sector with support from government could not only prevent the accelerating closure of firms, but critically could boost productivity growth and increase the number of well-paid jobs.

Why chemicals matter for resilience

The closure of domestic chemical manufacturing capacity also poses significant risks to the UK’s strategic resilience, particularly in pharmaceuticals and national defence supply chains.

The pharmaceutical sectors dependency on specialized chemical solvents—including acetone, ethanol, methanol, and isopropanol—means that disruptions to domestic chemical supply chains directly threaten the production of medicines and vaccines. When UK chemical manufacturers exit the market, pharmaceutical firms must source these critical inputs from international suppliers, creating vulnerabilities to geopolitical disruptions, supply chain shocks, and potential monopolistic pricing. During the COVID-19 pandemic, shortages of basic pharmaceutical precursors underscored this vulnerability. As domestic chemical capacity

⁴ For a further discussion of China’s trade policy and the economies of liberal democracies see [Why Liberals Should Embrace the Demise of the ‘Liberal International Order’: The European Legacy: Vol 31, No 1 - Get Access](#)

continues to decline, the UK's ability to rapidly scale production of essential medicines during health emergencies becomes increasingly constrained.

Defence and national resilience present even more acute concerns. Key reagents used in propellant production such as nitric acid and specialty chemicals required for defence applications have historically been produced domestically. The closure of plants producing these materials creates dependency on foreign suppliers for products that are integral to the UK's defence capability. Unlike commercial chemicals, defence-grade materials often require specialized production facilities, quality assurance, and security protocols that cannot be rapidly reconstituted if lost. The loss of this capability undermines the nation's strategic autonomy during periods of international tension.

Furthermore, the fragmentation of chemical supply chains creates cascading vulnerabilities. When an ammonia plant closes, it eliminates not only the primary product but also valuable by-products including carbon dioxide and nitric acid that downstream UK manufacturers have come to depend upon. This forces end-users to source from abroad at higher cost and with longer lead times. Over time, this erodes the competitiveness of the UK's firms in high-value sectors such as pharmaceuticals and advanced materials, creating a cycle of decline.

Maintaining a viable domestic chemical sector is therefore not merely an economic question but a strategic imperative for ensuring the UK can produce essential medicines, maintain defence capabilities, and sustain critical supply chains during periods of instability.

Data Methodology

This paper combines two datasets to assess changes in the UK chemicals sector: NAEI and Companies House. The datasets capture different aspects of industrial activity and should therefore be interpreted as complementary rather than directly equivalent measures of closure.

The NAEI dataset is used to identify active manufacturing plants and operating companies associated with emissions reporting. It contains point-source emissions records by year, plant and operator. Because a plant or operator may appear in multiple emissions records, the data were cleaned and deduplicated before calculating annual active plant and operator counts. Operator names were standardised to remove minor formatting inconsistencies, such as differences in capitalisation or spacing. This cleaning was undertaken to avoid treating the same NAEI-reported operator as multiple firms when calculating annual openings and implied closures, and when matching NAEI-reported operators to Companies House records.

Openings were identified as plants or operators present in year t but not present in year $t-1$. Implied closures were then calculated using the following identity:

$$\text{Implied closures in year } t = \text{Active units in year } t-1 + \text{Openings in year } t - \text{Active units in year } t$$

This approach ensures that openings and closures are derived consistently from the same NAEI dataset. However, an exit from the NAEI data should not automatically be interpreted as the precise date at which physical production ceased. A plant may remain in the data while environmental permits are surrendered and site-remediation requirements are completed. Equally, an operator may cease appearing because of changes in ownership, reporting arrangements, activity levels, or the relevant reporting threshold. NAEI-derived closures should

therefore be interpreted as changes in observed emissions-reporting activity rather than verified legal dissolutions.

Companies House data were used as a source of legal-entity information. The dataset includes registered chemical companies in the UK, together with their registered addresses, company type, incorporation and dissolution dates, and Standard Industrial Classification (SIC) codes, which indicate their business activities.

To explore subsectoral patterns, firms were mapped to trade categories corresponding to Chapters 51–59 of the chemical trade classification based on their SIC codes in Companies House: organic chemicals; inorganic chemicals; dyeing, tanning and colouring materials; medicinal and pharmaceutical products; toilet and cleansing preparations; processed fertilisers; plastics in primary forms; plastics in non-primary forms; and other chemicals. The resulting categorisation is intended to identify broad patterns rather than establish a causal relationship between firm closures and changes in the trade balance.

There are some limitations. The NAEI and Companies House datasets have different coverage, definitions and reporting lags. Neither dataset on its own provides a complete record of the timing, scale or economic impact of industrial closures. The regulatory lag in NAEI data means recent year figures understate actual closures. The small number of NAEI firms limits subsectoral analysis at the manufacturing plant level. Companies House data does not distinguish between manufacturing closures and other business entity dissolutions, potentially overstating manufacturing plant exits.

In addition, company-level classification can be difficult where firms operate across multiple SIC product categories. The results should therefore be interpreted as an indication of the direction and composition of sectoral change, to be assessed alongside output, trade, investment and employment data.

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