

BREXIT AND UK TRADE – WHAT HAS CHANGED?

An analysis of UK trade performance good and bad



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GLOBAL BRITAIN

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EXECUTIVE SUMMARY

The unwavering belief by many Remain supporters that Brexit has decreased UK trade does not stand up to scrutiny. This idea was based on 2021 trade data that has now been superseded by 2022 data that clearly shows Brexit was generally not the cause of lower trade. It has also been claimed that UK trade was recovering from Covid more slowly than comparable economies, my analysis shows that this was due to the UK's trade mix which is dominated by aerospace, vehicle, machinery and oil and gas exports. All were hit hard by Covid, and some have been slow to recover.

What has really happened to UK trade since leaving the EU?

In this paper I have carried out a diligent, sector-by-sector analysis of UK trade data which reveals that in almost all cases the factors that led to lower exports in 2021 compared to 2019 (pre-Brexit), were either temporary, or independent of Brexit, or predated Brexit, or simply reflected the true manufacturing origin of UK exports and held no significant implications for the UK economy.

Using ONS SIC product sectors I found that 20 sectors accounted for 93% of the decrease in UK exports. I then compared UK exports in each product sector exported to EU countries with exports exported to non-EU countries.

My research shows how the 2021 data used by many analysts captured UK trade at a nadir in multiple industries. These analysts simply used *total* UK trade data without examining which products had seen a fall in exports nor whether exports to EU countries had behaved differently from exports to non-EU countries. Mistakenly, the fall in total exports was blamed on Brexit even though it should have only affected EU trade.

In general Brexit is not the cause of lower UK trade between 2019-2021:

1. **Since Brexit, the UK have changed the way trade with the EU is measured.** The rules of origin (RoO) in the Trade and Cooperation Agreement between the UK and EU require many goods to be categorised by their place of manufacture or production. These changes lower the reported value of the UK's EU exports and imports. This applies particularly to the clothing and footwear sectors, where exports worth £8.5 billion in 2019 have apparently halved. However, these goods have been manufactured outside of both the UK and the EU for many years.
2. **The UK's export mix was particularly hurt by Covid Lockdowns in 2020 and 2021.** Five product codes accounted for 37% of UK trade in 2019 but they were responsible for 62% of the total decrease in UK exports between 2019 and 2021. This was mainly caused by Covid restrictions on air travel and factory closures which reduced the availability of key components such as vehicle computer chips. The former reduced demand for UK aircraft part exports and the later reduced the UK's production of vehicles. Additionally, a 40-year low in North Sea production saw fuel exports plummet. This combination of factors greatly lowered UK exports in 2020 and 2021 and is also part of the reason why UK trade has been slower than some other countries to recover.
3. **With the exception of vehicles, exports to EU destinations in these five sectors fell in line with – or less than – export falls to non-EU countries.** In general, UK exports from 2019 to 2021 held up better in EU markets than elsewhere. In some sectors, UK exports increased to EU countries while they decreased to non-EU countries, while in other sectors exports increased to some EU countries while falling to other EU countries. Analysts who fail to carefully examine sector trade patterns will inevitably draw the wrong conclusions as to *why* those exports have fallen.

UK trade is far healthier than the 2021 data made it appear

Full year trade data for 2022 was published on Friday 10th Feb, it shows UK goods exports to the EU rebounding from the lows in 2020 and 2021 in most sectors.

- Swings in energy production from very low in 2020 to very high in 2022 have had a dramatic impact on UK–EU trade statistics.
- Stockpiles of food from 2019 and 2020 have run out and customers are importing again.
- Trade apparently ‘lost’ to Brexit reflects manufacturing that moved to Asia decades ago. We can now measure the Rotterdam Effect and assess the impact of RoO on trade data reporting.

Long-term trends are having a much bigger impact on UK trade than short-term Brexit disruption.

In some product sectors, export declines set in well before the 2016 referendum. The causes vary from:

- uncompetitive tax regimes in the case of pharmaceuticals;
- environmental regulations in the case of oil and gas investment and development;
- or comparative advantage shifting to Asia for electronics, clothing and footwear manufacturing.

Misleading use of trade metrics is being used to disparage the UK economy and trade.

Trade intensity does not measure economic performance and may simply reflect a small GDP or the need to rely on trade for survival. For example, according to the World Bank, UK trade intensity was 57 in 2021, more than double the US at only 25, but less than a fifth of Malta’s whose trade intensity was 288. Unlike Malta, the UK and the US have large domestic markets and are less reliant on trade.

Trade analysis must show economic ‘value added’ in each product sector. Without clarity, headline trade numbers are meaningless.

Trade statistics must be viewed over several years to get a clear picture of true variations in trade. For example, in many products 2019 was a bumper year in UK exports so cannot be used in isolation as a fair representation of normal trade compared to 2021. Additionally, it is impossible to measure the success or failure of Brexit – which was a strategic shift in the UK’s trade policy – on the basis of a few year’s trade data.

Post Brexit trade data is now more useful because it reflects reality and gives a better understanding of what the UK buys, makes, sells, and where the UK’s best export prospects lie.

Rigorous trade research is vital for practical policy making.

- The single biggest commercial threat to UK exports (in value terms) is the supply of microchips to UK car manufacturers;
- The biggest industrial threat to the UK economy is the downturn in civil aviation;
- And the biggest ‘preventable’ tragedy is the steady haemorrhage of pharmaceutical manufacturing to low-tax competitors in the EU.
- Aerospace and premium auto manufacturing are critical to UK export prosperity – and that’s where trade policy should fixate.
- Oil and Gas are vital components of UK industry and trade, continued investment in this sector should be encouraged.

These challenges have nothing to do with Brexit. None of them would be solved by re-joining the Single Market.

The UK needs professional trade research. Besides rigorous sectoral analysis, this should include technical awareness. Only meticulous sectoral analysis can identify the opportunities now open to UK trade. At present UK trade policy – and trade commentary – is flying blind – or worse, being determined by lobbyists and media commentators with their own political axes to grind.

The government needs to understand why we trade. Is it merely in order to brag about a meaningless national statistic or is it to improve the UK economy, the general wellbeing of UK citizens and the profitability of UK corporations?

Hopefully this paper persuades them to choose the later.

FOREWORD

To begin it is necessary to restate some important points about trade. Some will seem obvious, but it has been amazing to see supposedly well-informed commentators overlook them:

1. Trade is demand driven

This should be obvious. The UK cannot force other countries to buy its goods if they don't need them, want them, or more importantly can't afford them. If the UK's export markets are in a recession due to their own internal problems, for instance high interest costs or exceptionally high gas prices, they are likely to import less of any UK good that would be considered discretionary spending. Most demand for imported goods has some level of price elasticity – if the price of those imported goods has increased, then sales will fall.

2. The Rotterdam Effect

This is a well-known assumption about trade within the EU but one that was once difficult to measure, so just accepted, and then ignored by most trade commentators. This effect meant that goods from outside the EU that were unloaded in Rotterdam, (or any other major cargo terminal in the EU) completed most of their customs declarations at that port. Any subsequent distribution to other EU destinations was often recorded as coming from the country where the good was landed (e.g. Rotterdam). This greatly exaggerated the trade data for EU countries with large container ports able to unload massive cargo ships coming from Asia and East Asia.

3. Rules of Origin (RoO)

All trade agreements have rules for determining where a good was made. These rules ensure that only legitimate products of the signatory countries can benefit from the terms of the trade agreement. The UK-EU Trade and Cooperation Agreement (TCA) has strict limits on the proportion of an imported good's value that can come from a country not party to the agreement. Generally, a good cannot have more than 50% of its value produced in a country outside the agreement. However, for some tariff lines in the TCA the limit is as low as 20%. For others the entire make-up must happen within the UK or EU, although the materials may be imported.

4. Accurate trade measurements

Combining items 2 and 3 will explain how we are now seeing the true picture of UK trade for the first time. Now that the UK is outside the EU, UK trade statistics are taken from customs declarations rather than Intrastat Survey data. This accounts for some of the biggest sectoral changes in the apparent value of UK trade. Several commentators have preferred to blame this change on Brexit, but all Brexit has done is force the UK to look at the reality of its trade with the EU – which is not the picture they had imagined.

We see this most clearly in UK import data: from Q1 2020 there is a sharp increase in imports from China mirroring reductions in imports from Germany, the Netherlands and France – even though there has been no change to the UK's trade relations with China, only a change for imports from the EU that no longer met RoO requirements. Consequently, we now see that many goods considered German, Dutch or French before Brexit, have so little of their production value made in these countries that they can no longer be classified as such. This is also true for many UK exports to the EU and can be seen most obviously in reductions in UK apparel and footwear exports and unsurprisingly the UK's 'exports' of tropical fruit and nuts. Trade in genuine EU and UK-made goods was not affected until the end of the transition period, 31 Dec 2020.

5. Modern manufacturing

There are very few goods that are wholly manufactured in one country, including the component parts and the raw materials. It is now quite common for over a dozen countries to be involved in the manufacturing of even the simplest item. For example, a pair of jeans could be designed in the UK, the cotton may be grown in Australia using seed, fertiliser and pesticide from the US, turned into yarn in China, woven into cloth in Indonesia, cut into pieces in Vietnam, sewn into jeans in Bangladesh where metal buttons, studs, or zips made in India will be added, before being landed in Rotterdam, and distributed to retailers around Europe. The same calculation for an aircraft is a hundred times more complex. So, determining where a product is made is inherently complicated.

6. National Trade statistics do not measure corporate profitability

While the export of manufactured goods is sometimes viewed with national pride, manufacturing standardised consumer products in the UK is rarely cost-effective. Many UK companies are more profitable by manufacturing in Asia, Africa or Eastern EU countries, than they would be if they manufactured in the UK. The UK's main manufacturing advantage was cheap abundant power, but that advantage has diminished with the UK's taxes on energy, coupled with high labour costs and a strong currency: together these have moved manufacturing out of the UK. However, the bulk of the revenue from the sale of most products goes to the retailer, wholesaler, marketing company and designer and generally still based in the UK, although online retailers are often non-UK companies.

7. Entrepot Trade

Some trade adds very little value to the local economy. Imports landed in the UK and then distributed to other countries only contribute to the profits of UK distribution companies. We are also seeing this now with natural gas. The UK is importing liquefied natural gas (LNG) from Qatar and the US, returning it to gas in the UK, and then re-exporting it to the EU via pipeline. This trade will add significantly to UK trade figures but add very little value to the UK economy.

8. Measurements used in this paper

UK trade data is now based on customs declarations and no longer relies on Intrastat surveys other than trade between Northern Ireland and the EU. The new data is more accurate, but its introduction was staggered, first to GB exports to the EU in January 2021 then to GB imports from the EU in January 2022. UK trade data is shown in British Pounds (GBP). But when comparing various countries' trade, I use US Dollars (US\$). Trade statistics are in current prices unless stated otherwise and come from the [Office for National Statistics](#) (ONS), His Majesty's Revenue and Customs (HMRC), United Nations' Comtrade (COMTrade) database and the [International Trade Centre](#) (ITC).

9. Value versus volume

Trade can be measured by value or by volume. Volume or weight is useful for homogeneous commodities and unit volumes for consumer goods. For many sectors, however, volume is a useless metric. For many of the UK's high-value/low-volume exports such as satellites or fine art, value is much more important. Although volume figures are thought to remove any increase in trade values caused by inflation, trade volumes may be lower simply because of those higher prices.

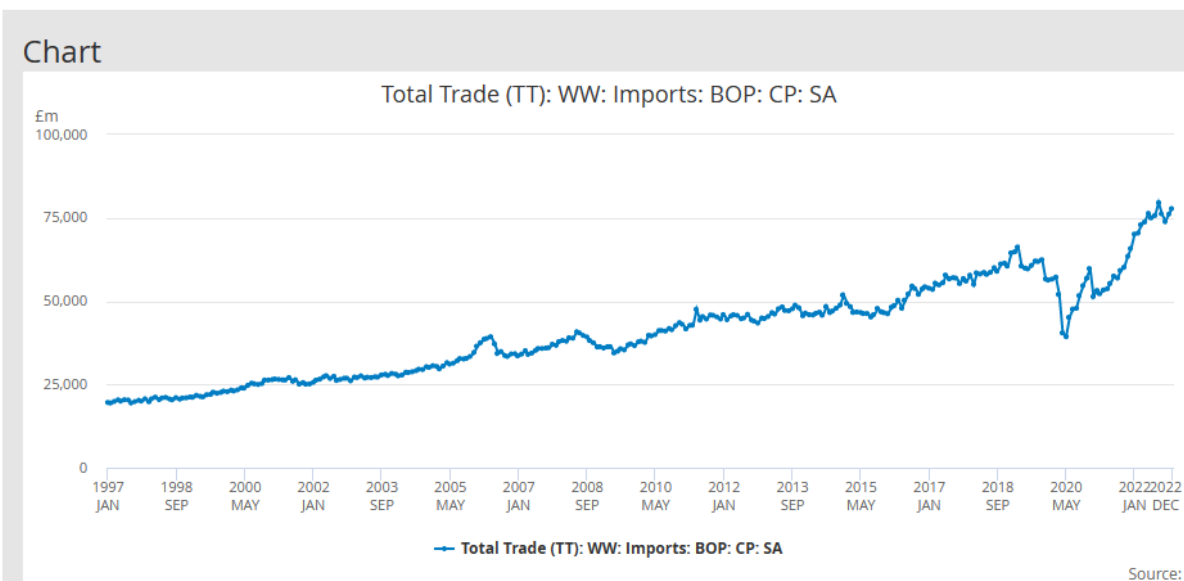
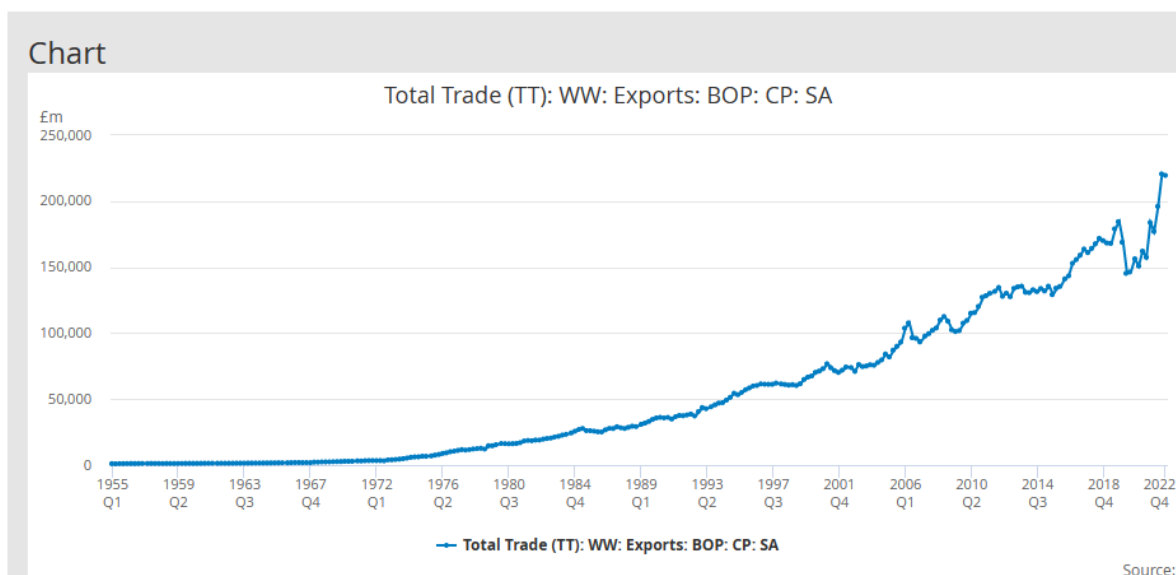
10. Data and data noise

While Brexit began on 31 Jan 2020 the transition period ended only on 31 Dec 2020. We have just three years of data and that period coincides with international Covid closures, travel restrictions, Russia's invasion of Ukraine and the consequent sanctions which dramatically increased energy prices, which increased the price of manufactured goods and many agricultural products. So, the small amount of data we have is heavily influenced by many forces other than Brexit.

INTRODUCTION

Between 2019 and 2020 international trade fell by over two and a half trillion US dollars due to covid lockdowns, factory closures and international travel bans. Yet anyone who has been listening to the BBC or reading the FT or the OBR reports or even the Bank of England's Governor's evidence to the Treasury Select Committee will have heard them proclaiming that Brexit has devastated UK trade. So you might be surprised to see the latest charts of UK trade from the ONS, below. The top chart shows that [UK's total exports](#) and the bottom one the [UK's total imports](#).

Hardly the picture of Armageddon that the declinists listed above had portrayed. I have listed some of their worse claims about the decline of UK trade and the UK economy at the end of this paper, in Annex A, in case you want to refresh your memory of what they have said. The declinists managed this sleight of hand by concentrating on just the two years of trade data recorded after the UK left the European Union, two years that coincided with an international pandemic, lockdowns in the UK and in some of its largest trading partners, and travel restrictions on both tourist and business travel. But according to the Declinists the drop in UK trade was all to do with Brexit. The fact that international trade also dropped was in their minds, merely a coincidence.

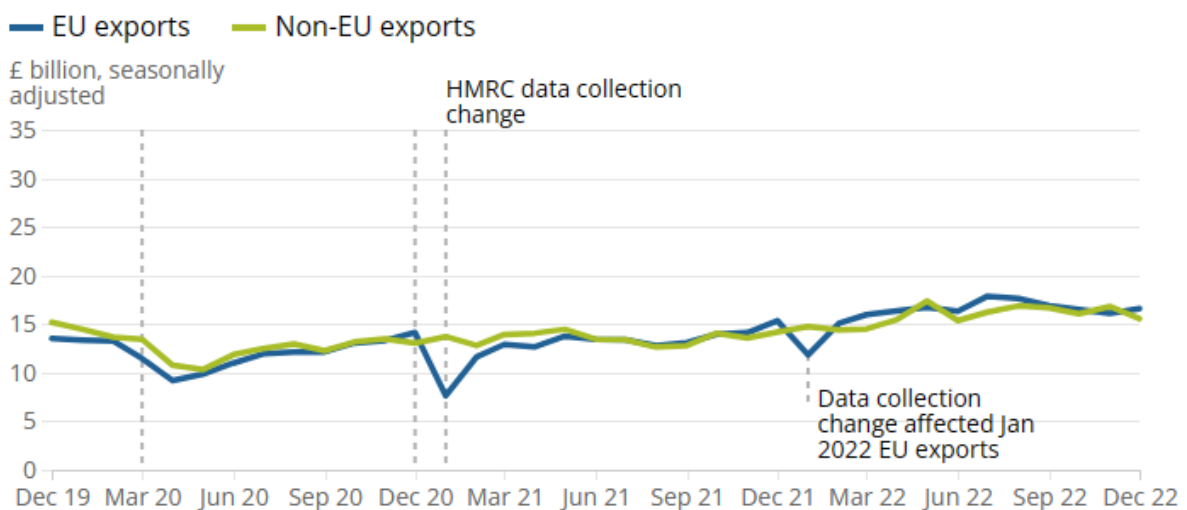


In this paper I have attempted to establish the true cause of the fall in UK trade. The most obviously method to evaluate whether Brexit has hurt trade is simply to compare UK trade patterns for the years before Brexit, with the three years post Brexit, and between UK trade with EU countries and UK trade with non-EU countries. Something that the Declinists seemed reluctant to do.

But the pandemic distorted trade to such an extent in 2020 and 2021 that UK trade statistics measure much more than Brexit and the 2022 trade figures are distorted by continued lockdowns in many parts of China, Russia’s invasion of Ukraine and the West’s subsequent sanctions which have pushed up fuel and energy prices as well as the price of fertiliser, many grains, oil seeds and animal feeds, while also lowering export consumers’ discretionary spending.

The ONS has made some attempt to do this by comparing seasonally adjusted monthly goods exports to EU and non-EU countries, Oct 2019 to Oct 2022, as shown in the chart below. It looks relatively flat. In terms of headline numbers, it is hard to discern a Brexit effect on UK exports other than the spikes when the data collections changed but on both occasions, this had reversed by the next data release.

Goods exports



Source: Office for National Statistics - UK trade statistics, seasonally adjusted

While the chart above doesn’t look particularly grim, it does show total exports. Amalgamated figures can often hide many calamities cancelled out by other windfalls, that only a through sectoral analysis would show. There are also other issues that affect UK-EU trade statistics not obvious in this graph: the UK is now a ‘3rd Country’ trading under the terms of the UK-EU Trade and Cooperation Agreements (TCA) this changes the recorded origin of many EU and UK products¹.

It is surprising that declinist economic commentators and academics have not delved into the differences between how we now measure trade or even what the UK trades, nor what it trades with the EU or with the rest of the world. Many firmly believe that the UK ‘does not make anything anymore.’ That isn’t true, but it also displays a very 18th Century mindset, where only physical goods matter and where the value of a product is only in its production cost. In the 21st Century developed nations export almost as many services as they do goods, and the value of the physical manufactured

¹ Rules of Origin in the [Trade and Cooperation Agreement between UK and EU – CP 426 \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/103111/Trade_and_Cooperation_Agreement_between_UK_and_EU_-_CP_426.pdf)

item is often only a small fraction of the eventual sales price. However, design, research, testing, development, promotion, sales, accounting, are all valid parts of the production process.

This paper is based on a sector-by-sector analysis of recent UK trade data. Examining which exports have decreased, and whether that decrease was greater to EU countries than to Non-EU Countries. It then examines what could have caused that decrease: Brexit, Covid, factory closures, travel restrictions or something else entirely. It analyses whether some post-Brexit falls fit a pre-Brexit pattern. And it steps behind the trade data to see whether headline numbers for falling trade really affect UK manufacturing or corporate profitability.

Trade is driven by private companies fulfilling foreign customer demands. These companies must make a profit if they are to survive. They will only produce goods in the UK if it is financially viable to do so. In my conclusion I make proposals of what the UK government could do to make the UK a more attractive place for export focused companies to operate.

A note about Inflation

Some Brexit detractors will claim that any increase in UK exports in 2022 was only due to increased inflation. I have no doubt that this is true at least for some part of some of the increase, and especially for oil and gas exports but possibly less so for high value items made on contract or for service exports.

But inflation should not alter the relative change in exports to the two populations that I am examining: exports to EU and exports to non-EU countries. For example, UK crude oil exports to non-EU China and those to EU Netherlands should be similarly inflated. Thus, any unsynchronised trade patterns, such as exports increasing to China but falling to the Netherlands, could be a sign of Brexit trade friction. Inversely, export increases to the Netherlands but decreases to China could show there is little Brexit trade friction in this sector. And as export prices are recorded as fob, we don't have to worry about the additional costs of freight or insurance.

The other reason I am using current price data is that it is available in granular detail about the type of products exported and the export destination. While the ONS's published chained volume statistics (CVM) are only available in ten quite broad product groups. As I am only reviewing sectors where total UK exports fell between 2019 and 2021, using the published CVM measurements would exclude 3 of these 10 broad product groups: SITC 2 Crude materials; SITC 4 Animal and vegetable oils and fats; and SITC 6 Material manufactures even though within those broad categories there are export industries that fell between 2019 and 2021 and deserve investigation.

I also use ITC/Comtrade data as they give even more detail about export products and destinations by both value and volume for commodities where that is an appropriate measure. Unfortunately, Comtrade data for the UK has not yet been updated beyond the third quarter of 2022. But it is still useful if greater scrutiny is needed in a product sector.

That said, looking at CVM data for *All commodities, excluding precious metals*, while both exports to EU countries and exports to non-EU countries fell between 2019 and 2021 by 12% and 10% respectively, in 2022 exports to EU countries increased at twice to rate of exports to non-EU countries 6% and 3% respectively. This implies that blaming the fall in UK trade in 2020/21 simply on Brexit may not be justified. But we shall see.

THE PAPER

The purpose of this paper is to draw attention to the following critically important conclusions that result from a thorough sectoral analysis of EU-UK trade data:

1. **A sector-by-sector scrutiny of trade data indicates that Brexit was not a factor, or only a minor factor in most of the fall that UK exports suffered in 2020 and 2021.** This analysis shows that in value terms, over 90% of the decline was due to factors that were either temporary, or predated Brexit, or were independent of it, or had no significant implications for UK manufacturing. The remaining, unaccounted-for export falls (around 7% of the £49 bn total sector falls) are immaterial and scattered amongst various sectors.
2. **Much of the immediate change in trade was caused by the Rules of Origin of the [UK EU Trade and Cooperation Agreement](#) reallocating trade from EU Countries to non-EU countries – most notably China.** Consequently, many goods previously considered UK exports or EU imports before the Brexit date, have so little of their production executed in the UK or the EU that they can no longer be classified as such. This is most obviously seen in UK-EU trade in clothing and footwear.
3. **Since Brexit, [UK trade data is based on actual customs declarations](#) and no longer relies on Intrastat surveys other than for trade between Northern Ireland and the EU.** The new data measures the true origin of traded goods, but its introduction was staggered, first to GB exports to the EU in January 2021 then to GB imports from the EU in January 2022.
4. **Considering both the TCA rules of origin and the collection of more accurate formal customs declaration data, rather than Brexit changing UK–EU trade, what we now see in trade data is a picture of UK–EU trade that is closer to reality than at any time since 1973.**
5. **However, since Brexit, global trade has been reduced by Covid lockdowns, factory shutdowns, key component shortages, fuel shortages, high transport costs and shortages of animal feed stocks.** All these have added considerable noise to the available trade statistics, so it is far too early to make any conclusions about the effects of Brexit on UK trade. The ONS also states this in its December trade release. What the ONS doesn't state, however, is that these factors greatly impacted the UK's two biggest export industries: motor vehicles and aerospace.
6. **Trade is demand Driven.** There is an assumption among anti-Brexit commentators that lower UK exports are the fault of UK exporters or the UK government. But trade is demand driven. If UK customers have their own economic problems, they will buy fewer goods including UK exports, many of which have highly elastic demand – that is if their price increases, the quantity purchased will fall by a greater amount.
7. **Exports aren't everything.** The UK has a large affluent domestic market, so the majority of UK businesses do not need to export. In some sectors, higher domestic demand from Covid related import shortages or consumer preferences for British products has meant lower exports. While in years when production is lower, domestic customers will be supplied first.
8. **The nature of a customs Union is often misunderstood.** The UK must accept that the EU was designed to keep out competing goods. They only willingly buy products that they cannot produce themselves. That is why it is vital that the UK takes this opportunity to move on to other markets if it is to realise the opportunities afforded by Brexit.
9. **UK commentary suffers from a misplaced attachment to unfocused metrics such as 'trade intensity'.** This has serious implications. It misunderstands the nature of the UK economy and its high domestic demand while also diverting attention from the critical challenges that face specific UK manufacturing sectors, especially in vehicle and pharmaceutical trade.

The UK's export sectors are heavily weighted to 6 sectors.

If we leave out services and just look at UK goods exports, we see that since 2015 the UK's biggest export industries have been motor vehicles: then other transport – aircraft, spacecraft, ships and military vehicles; Machinery; oil and gas; pharmaceuticals and electronic machinery.

Many economic commentators have chosen to concentrate on the UK's '**goods export volumes**' even though the majority of UK exports are either high value/low volume goods or services. The UK does not specialise in high volume consumer goods or many raw commodity exports, both of which reflect well in measured volume. Since 2015 the value of UK service exports has been worth between 80% and 90% of UK goods exports.

It is understandable – after four decades of subcontracting trade concerns to Brussels – that the UK effectively is 'flying blind' with regard to understanding its trade performance. While the UK's new trade negotiators have mimicked the EU's protectionism without recognising that for most consumer goods, especially food, the UK is a net importer. The European Commission President Ursula Von der Leyen wants to reinforce EU protectionism with an 'Europe First' trade policy, following the Biden Administration's protective 'Inflation Reduction Act'. However, the two economies are very different – the US could probably survive in isolation, it would just cost them more, while the EU probably couldn't, unless they are prepared to return to the industry of the 16th century. Von der Leyen appears to have as little understanding of the vast international trade in finished and semi-finished goods and component parts that the EU relies on as UK politicians, media commentators, and public servants have about the UK.

POSSIBLE BREXIT IMPACT ON EXPORTS TO THE EU by product sector

While it is true that UK net trade decreased by £39.9 billion between 2019 and 2021 – a drop of 11% (*current prices*) – this hides the fact that some product sectors experienced export decreases and others export increases. Of the sectors where exports increased, their increased value totalled £9.1 billion, while sectors with decreases came to £49 billion. However, 62% of this export value decrease fell into just five product sectors, while 93% fell into the 20 product sectors listed below.

In this paper I analyse each of these 20 product sectors to see if there is a Brexit effect causing the fall in exports. I have assumed that if Brexit is the cause, then any decrease in exports to EU countries in a given product sector would be greater than the proportion of exports of that product to EU countries. Put simply, if the EU bought 44% of UK Motor Vehicle exports in 2019, and car exports fell by £10 billion then if Brexit trade friction were the cause of this fall, I would expect the decrease in the value of vehicle exports to the EU to be more than £4.4 billion (44% of £10 billion), which they were. I then looked at the car sector in depth to see if the export decrease was solely Brexit related or whether there were other influences involved. In the car sector there were. I repeated this process to the other sectors where exports dropped disproportionately to EU sales.

Summary of UK export falls by sector 2019 to 2021									
ONS SIC Code	ONS Sector Name	Total UK Exports in Sector			Brexit or Covid decrease	Cumulative total export decrease	Cumulative % of total export decrease	2022 Exports	2022 exports compared to 2019
		2019	2020	2021					
29	Motor vehicles, trailers & semi-trailers	41.83	30.13	31.88	-9.95	-9.95	-20%	34.31	-18%
30.3	Air & spacecraft & related machinery	35.22	25.04	26.61	-8.62	-18.56	-38%	33.45	-5%
6 & 19	Crude & refined oil, gas and coke	37.57	24.08	31.66	-5.91	-24.47	-50%	55.54	48%
32	Other manufactured goods	12.43	9.56	9.51	-2.92	-27.39	-56%	10.86	-13%
14	Wearing apparel	7.22	6.66	4.45	-2.77	-30.16	-62%	4.23	-41%
21	Pharmaceutical products & preparations	24.19	22.61	21.62	-2.57	-32.73	-67%	25.92	7%
24.4	Basic precious & other non-ferrous metals	24.29	25.53	22.22	-2.07	-34.80	-71%	51.25	111%
26	Computer, electronic & optical products	28.22	25.03	26.23	-1.99	-36.79	-75%	28.83	2%
10	Food products	13.49	13.28	11.99	-1.50	-38.29	-78%	13.64	1%
90 & 91	Art and Antiques	5.27	3.00	3.80	-1.47	-39.76	-81%	4.84	-8%
28	Machinery & equipment n.e.c.	33.56	29.28	32.28	-1.28	-41.04	-84%	36.33	8%
15.2	Footwear	1.92	1.77	0.95	-0.97	-42.02	-86%	0.79	-59%
27	Electrical equipment	12.42	11.25	11.60	-0.81	-42.83	-87%	12.51	1%
11	Beverages	8.35	6.85	7.70	-0.65	-43.49	-89%	9.72	16%
8.9	Mining & quarrying products n.e.c	0.61	0.11	0.14	-0.46	-43.95	-90%	0.17	-71%
13	Textiles	2.78	2.59	2.33	-0.45	-44.40	-91%	2.50	-10%
1.1	Non-perennial crops	1.12	0.94	0.67	-0.45	-44.85	-92%	1.15	3%
23	Other non-metallic mineral products	2.85	2.44	2.51	-0.35	-45.20	-92%	2.79	-2%
17	Paper & paper products	2.59	2.39	2.27	-0.32	-45.52	-93%	2.73	5%
31	Furniture	1.41	1.12	1.21	-0.20	-45.72	-93%	1.49	6%
Unit: GBP Billions									

1. ONS SIC 29: Motor vehicles, trailers & semi-trailers

Exports in this sector fell by over £10 billion between 2019 and 2021 while exports to the EU made up 46% of total UK vehicle exports in 2019 but 53% of the decrease in exports between 2019 and 2021. So, at first glance this decrease could appear to be caused by Brexit. However, Covid hammered UK car production and microchip shortages are now impeding recovery. The 2022 data shows that this sector is off its 2020 lows, but total exports are still 18% below their 2019 levels.

UK exports of vehicles fell the most between 2019 and 2021. The auto sector (which includes parts and accessories) notched up a £5.4 billion fall in the value of exports to the EU. This represents a real term drop in value of 31.3% as against 2019 exports. This is very steep. It also contributed 29% of the total fall in the value of UK goods exports to the EU between 2019 and 2021 in the 20 sectors that account for 90% of the UK's total export falls.

Nevertheless, the evidence implies that Brexit is not to blame for the downturn in UK trade in motor vehicles. This is because the UK's auto exports to markets *outside* the EU also took an almighty hit in 2020. They fell by £6.2 billion as compared to 2019, a fall of 26% while exports to the EU fell by 30% (*current prices*). If Brexit was the predominant or principal factor in export declines, then UK exports outside the EU would have continued their impressive climb.

The cause of falls in 2020 was production shutdowns owing to Covid. 2021 was a slightly different story, as exports to non-EU destinations did rebound somewhat, seen in the graph below, while exports to the EU fell slightly. But while this could be attributed to Brexit, other explanations are more likely – and sectoral research shows why.

It is important to examine *which* markets were responsible for UK export growth. Specifically, the UK's premium marques – Range Rovers, Bentleys, Rolls-Royces, Aston Martin Lagonda, and MINIs etc – in markets *outside* the EU. Auto exports to non-EU countries grew by a staggering 6.5% per year in the

two decades to 2019², and that's almost entirely thanks to the success of luxury and sports brands. The UK's largest export markets are the US and then China. Meanwhile, auto exports to the EU barely grew at all. On average, they were worth less in the decade to 2019 than the preceding decade. This mismatch in export performance delivered a complete switch-around in the UK's auto-related trade. Twenty years ago, the EU accounted for 60% of UK auto exports by value. That statistic has flipped. In 2021, *non*-EU markets imported just under 60% of UK vehicle exports.

Sadly, the UK's biggest export industry was particularly hard hit by the international pandemic lockdowns in 2020. Vehicle assembly lines around the world were periodically shuttered. Then in 2021, global car manufacturing was hit by a world-wide shortage of microchips, which persists. The UK's Society of Motor Manufacturers and Traders ([SMMT](#)) [has attributed the steep fall in UK car manufacturing since 2019 'largely' to these two factors.](#)

Research from Germany bears out the observation. By mid-2021, [automotive output from German factories was at just over 60% of its level in mid-2018.](#) In Germany, the 2021 slowdown was primarily blamed on the global shortage of microchips.

The slowdown persists in most major car manufacturing countries. In US dollars, exports of German, Japanese, American, Spanish, French and British vehicles in Q2 2020 were all less than half their Q2 2018 levels. None of these countries' vehicle exports had fully recovered by Q2 2022. Meanwhile exports from South Korea, Czech Republic and Slovakia did not fall by more than 50% between Q2 2018 and Q2 2020 and were all exporting more in Q2 2022 than they exported in Q2 2018.

So, the problem for the UK industry isn't that cars aren't being sold in EU markets, it's that they are not being made in the first place. And the principal cause according to the car industry itself was the shortage of microchips. And this a problem shared by comparable countries, although of course unlike the UK, car-making is not the number-one goods export industry for all those countries – certainly not the US.

² In real terms. Office for National Statistics BoP CP Series, Q4 2019 publication. Released February 2020. ONS export deflators published March 2020 (2016 base prices)

There is a secondary cause to UK decline, however: that UK motor manufacturing has steadily shifted from the UK to EU countries over the past 20 years. In the two decades before Brexit, considerable UK auto manufacturing moved out of the UK and often across the channel to countries that include Germany, Spain, Austria, the Netherlands and Slovakia, as well as Turkey which is in a customs union with the EU.

The movement of UK auto manufacturing to EU countries, partly lured by subsidies is a huge, on-going threat to the industry. To put it in perspective, in 2000, the UK had a deficit of £7.9 billion in trade in motor vehicles and parts with the EU. By 2019, this had ballooned to £29.6 billion. This cardinal trend barely receives a mention in any analysis of UK-EU trade, but its impact is huge.

Vehicle export mix and UK production

Since 2000, the types of cars that the UK exports to EU and non-EU markets have diverged dramatically. Exports to countries *outside* the EU are almost entirely those premium marques mentioned above, the Range Rovers, the Bentleys, the Rolls-Royces etc. China and North America are huge markets for these top-end vehicles, but they are sold the world over. Meanwhile, UK produced exports to EU are skewed towards lower value per-unit Japanese brands – Nissan, Toyota, and until 2021, Honda. As supplies of microchips dwindled and production slowed, car makers devoted scarce supplies to higher value cars³. By default, this preferenced UK's non-EU trade.

A second factor is the July 2021 closure of Honda at Swindon. The timing of this closure will have had some impact on the 2021 data for UK vehicle exports to the EU although at the time of the announced closure Honda's biggest export market for UK manufactured cars was the US. It's hard to attribute this closure to Brexit, however, as at the time [executives stated the opposite](#).

The EU–Japan Economic Partnership Agreement (EPA), which entered into force in February 2019 removed the 9–10% tariff barrier between Japanese car plants and EU markets, and the core original business case for establishing the plant in the UK back in 1985. In other words, Honda executives had a strategic reason for ending production at Honda that was unrelated to Brexit. If the UK had remained in the EU, the plant would almost certainly still have closed, unless the Government had offered an insane level of subsidies. Perversely, only a 'No Deal' Brexit would likely have saved that plant, once the EU–Japan EPA was finalised.

A third factor for a decline in auto related exports might be Ford's closure of its engine manufacturing plant at Bridgend in Wales, announced in 2019. This supplied Ford plants in continental Europe, and hence contributed meaningfully to the UK's auto export data. But attributing this to Brexit is also problematic. As with Honda, the company claimed at the time that [the closure was "nothing to do with Brexit"](#). Corporate analysis supports this. Ford had already closed its last, major UK-based vehicle manufacturing plant in Southampton in 2013, as part of its big, pre-Brexit disinvestment from the UK. And Bridgend's contracted work for Jaguar Land-Rover has in any case moved to a new-build factory off the M5 in Wolverhampton. In closing Bridgend, Ford followed a trend of disinvestment in the UK that commenced well before Brexit.

So much for the grim, 2021 data. Happily, it does not reflect future prospects. In October the UK's most vital auto exporter, Jaguar Land-Rover (JLR) reported a record, Quarter 1 order book, with a [backlog of 205,000 vehicles](#). Demand is emphatically not a problem for the industry. JLR's production headaches are microchip related and its biggest current sales challenge is the ongoing Covid lockdown in China. Meanwhile, the UK's biggest mass-market manufacturer, Nissan, is also optimistic. The

³ The phenomenon was also noted in Germany. Ibid.

company's attest Qashqai model is a huge success, and the company is investing £1 billion to set up an electric vehicle (EV) hub at Sunderland. It's EV battery partner, Envision, has already begun work on a second, [12GWh factory in Sunderland, sufficient for 100,000 vehicles](#). Meanwhile, these [investments will increase production and add above 2,500 jobs](#) to Sunderland car manufacturing.

Bentley and Rolls-Royce are both booming. In January 2023, [Rolls-Royce Motor Cars reported record sales, driven by demand from the US](#). [Bentley reported record sales figures in the first quarter of 2022](#) and is [investing a £2.5 billion at its Crewe plant](#). And in the UK motor-vehicle industry, where investment goes exports follow, because approximately 80% of output is exported.

To summarise: the fall in UK motor-vehicle exports has a major impact on UK trade data simply because in an average year it delivers approximately 12% of UK goods exports. This is a bigger share than any other single-industry sector. But the sharp dip in auto exports to EU markets in 2021 is not attributable to Brexit. It is primarily due to factory shutdowns in 2020 and a global shortage of microchips in 2021. These factors are globally acknowledged. Non-EU exports saw some bounce back in 2021. But this is most-readily attributable to non-Brexit factors as well: prioritisation of microchips for premium vehicles, and disinvestment in EU-destined production that would have happened anyway (according to the executives involved) or was already apparent in long-term corporate strategy.

A far more serious issue for UK employment – and to a lesser extent its export statistics – is that UK marques are being assembled in factories in Slovakia, Austria and elsewhere. For example, the re-launched Land Rover Defenders are now made in a €1 billion factory in Nitra, Slovakia partially thanks to the Slovak Government providing €125 million in regional development grants to encourage Jaguar-Land Rover to build a new plant in Slovakia. While this loss of UK manufacturing will hurt UK trade figures, it is extremely beneficial to JLR company profits.

Trade analysts should acknowledge that this subsidy-induced offshoring began well before Brexit. It was one reason that many people voted to leave the EU in the 2016 referendum. There was considerable anger at the way the EU was funding many UK companies to move their manufacturing to eastern EU countries. Even the [Financial Times investigated factory relocation in 2010](#) and found that UK companies were being given regional development grants to move their manufacturing.

2. ONS SIC 30.3: Air and spacecraft and related machinery

Total exports in this sector fell by £8.6 billion. This brings the total fall for the two sectors so far analysed to £18.6 billion, or 38% of the UK export sectors showing decreases between 2019 and 2021. Aircraft and spacecraft exports to EU countries made up 34% of total UK sector exports but fell by only £0.58 billion, equal to 7% of the total sector export decreases. This sector has rebounded in 2022 and although total exports are still 5% below their 2019 levels, exports to EU destinations were 10% higher than in 2019.

The falls in exports of aircraft and related machinery were a direct result of global Covid lockdowns and travel restrictions not Brexit. All countries with major civil aerospace industries experienced an identical nose-dive in output. In 2020 exports to all of the UK's major markets fell with the exception of some Gulf States and Norway. We also saw small increases in exports to the Netherlands and Belgium in 2020 and larger increases in 2021 with, the Netherlands (£338m) and Belgium (£192m) and Denmark (£129m) importing UK goods in this sector having imported very little pre-Brexit, this was probably the first signs of these countries becoming distribution centres for the EU. Previously the UK's aerospace exports largely mirrors what happened in France, Germany and Spain, because those countries are also partners in Airbus.

That said, the data shows that the UK's aerospace industry was probably the hardest hit during the entire 2019-2021 period. After a sharp drop of 33% in 2020, exports of aircraft and spacecraft goods to the EU actually bounced 41% in 2021 and have increased a further 16% in 2022 so are now £1.2 billion above their 2019 exports (current prices). Despite a large fall in exports to France in 2021, exports to most other EU countries were higher, so exports to the EU as a whole increased by £3.4 billion between 2020 and 2021, with total exports to EU countries worth £11.5 billion.

Meanwhile non-EU exports fell by £6.2 billion in 2020 and continued to fall in 2021, and although they have recovered somewhat in 2022, they are still almost £3 billion, or 13%, below 2019 values. This illustrates as clearly as anything can that any fall in exports in this sector in 2020/21 was nothing to do with Brexit.

This sector includes world-class products like Rolls-Royce aircraft engines and is vital to UK trade. But exports of jet engines collapsed in 2020, as airlines around the world cancelled or delayed orders for aircraft. Consequently, Rolls-Royce share-price halved since the onset of travel restrictions. And its impact on the sector is huge, as jet engines contribute around one-third of the value in any given year. All this is set to reverse, as [Airbus has just agreed a deal with Air India to supply 250 aircraft](#) including 34 A350-1000 and 6 Airbus A350-900 these will require [80 Rolls Royce Trent XWB engines](#) as well as wings made in the UK. The Airbus A350's exclusively use Rolls-Royce Trent XWB engines, so the UK is now exporting a lot of engines to airlines that typically purchased US-made engines.

The UK aircraft exports mostly registers UK exports of aerospace parts and engines to the place of final airliner assembly. This is principally wings made in Broughton, North Wales to airliner assembly lines in Toulouse, France, and Hamburg, Germany. However, it also includes sub-assemblies for landing gear, and numerous other parts such as aircraft seating. The UK does export some parts to Boeing, in the US, but their value is far lower.

This means although the headline trade figures suggest the EU takes about 40% of UK aerospace exports. In reality, these customers are in fact industrial partners in a single commercial operation – Airbus – which then sells planes to countries around the world. This exaggerates the apparent impact on UK exports to the EU. Taking the final customer as the export destination would give a much higher export ratio in favour of non-EU markets. As UK factories contribute approximately 20% of the value of each Airbus aircraft (minus the engines), a collapse in deliveries of airliners by Airbus hits UK exports extremely hard.

The sale of component parts always depends on the health of orders for the end product. In 2021, from Comtrade data, French exports of *Powered aircraft (HS 8802)* were approximately half their 2015 export values. Measured in Euros, they fell from €42.4 billion in 2015 to only €21.7 billion in 2021. France's imports of aircraft component parts from all exporters has followed the same trajectory. Consequently, UK exports of *Parts of aircraft (HS 8803)* were down by 23.5% from their 2015 GBP value, or down 35% if measured in Euros. Clearly showing that blaming Brexit is folly.

Trade in aircraft and spacecraft is especially lumpy. Without careful examination of the trade data, it is easy to jump to false conclusions. For example, from Comtrade data, the UK's export of spacecraft and satellites was worth only £2 million in 2013 but £200 million two years later, then £17 million the following year only to bounce to £280 million in 2018. To blame the fall to £7 million in 2021 on Brexit would be to completely misunderstand the nature of this high-value, low-volume industry.

This sector also includes the UK's defence aerospace industry which is a more EU-oriented industry than its civil aerospace. So as long as defence-related factories functioned, orders and deliveries continued as normal. By default, this meant UK exports of fighter-jet engines to the EU held up comparatively well.

What do these figures mean for the health of UK exports? First, they show that the UK's aerospace industry is still suffering the after-effects of international travel bans. As aerospace is the UK's second biggest manufacturing export industry, data for aerospace exports exert a huge effect on the UK's overall export performance – far more so than for most comparable economies. [The UK currently has an approximate 18% share of the global market in aerospace](#), which is a phenomenal achievement.

The UK's two most valuable export industries – autos and aerospace – both suffered huge non-Brexit related hits to their exports between 2019-21 and have not fully recovered in 2022. In combination, this has done unique damage to UK economic performance in 2022 as well as its export statistics.

3. ONS SIC 6 and 19: Crude petroleum & natural gas and Coke & refined petroleum product

UK exports in this sector to all countries fell by £5.91 billion between 2019 and 2021. This brings the cumulative total for the top three sectors to £24.5 billion or 50% of total UK export declines. Exports to EU countries accounted for 61% of UK mineral fuel exports in 2019 but decreased by only £2.6 billion between 2019 and 2021 — that is only 43% of the decrease in total UK oil and gas exports. This sector has more than rebounded in 2022 with total exports 48% above their 2019 levels, exports to EU destinations were 65% higher than in 2019. This increase was obviously due to both higher oil and gas prices as well as greater export volumes, but it clearly shows that Brexit trade friction was not the cause of lower exports in 2020 or 2021.

Economic commentators should have been aware of the large impact changes in energy production have on UK trade flows. Quarterly UK exports of mineral fuel and mineral oil halved in GBP terms between second quarter 2019 and the second quarter 2020 and stayed low until Q2 2021. This fall was mirrored by exports to the EU who buy between 60% and 70% of UK oil and gas exports.

Necessarily, this had a huge impact on total UK exports to the EU. Almost 30% of the fall in the value of goods exports to the EU in 2020 alone is due to lower exports of hydrocarbons. In 2020, UK exports of oil and gas to the EU fell by £7.4 billion, as compared to 2019 but exports rebounded in 2021 so were only down £2.6 billion over the two years I am analysing. This represents 14% of the total £18.2 billion fall in UK goods exports to the EU in the twenty sectors under review.

This drop has now fully reversed, as shown in the chart below. Oil and gas exports in 2022 were £23.9 billion higher than in 2021, with exports to EU countries accounting for 73% of this increase. Obviously, this is measured in value rather than volume, and oil and gas prices both increased enormously in the summer of 2022 and then fell back again as the year finished. This would have greatly inflated the export figures.

Clearly, Brexit cannot be blamed for the fall in hydrocarbon exports in 2020 and 2021. This was caused by lower demand due to Covid lockdowns coupled with historic lows in output from the UK oil and gas industry. The fall in production is primarily due to a dramatic fall in investment in North Sea production

since 2014, plus the effect of maintenance on the Forties Pipeline system in 2021. According to official DUKES data, total 2021 **energy production** in the UK was 14% lower than in 2020 – [the lowest level in 50 years](#). Falls in oil and natural gas output account for almost all of this outcome. **Production of primary oils** was down 17% compared to 2019, and **production of all petroleum products** (which UK exports to EU, and the Netherlands in particular) [reached a record low](#). Brexit is irrelevant to this fall in production — except tangentially. Leaving the EU means changes to stockholding obligations, and so UK stocks have fallen.

Not only has [the trade data for 2022](#) registered a dramatic reversal of recent export declines, but 2022, saw record exports of natural gas to the EU, largely thanks to re-exports of Liquid Natural Gas (LNG) imported from North America and the Gulf.

Many Central and Eastern European countries, especially Germany, lack the [terminal and regasification infrastructure to receive sufficient LNG to make up for shortfalls in supply from Russia](#). Spain and France have these terminals but not the pipelines to transport it to Germany and central Europe.⁴ Fortunately, the UK has three terminals – the South Hook⁵ and Dragon terminals in Milford Haven and the Isle of Grain facility, east of London – which now receive huge shipments of LNG from the US and Qatar.

Meanwhile, two interconnectors, one in Belgium and one in the Netherlands – pipe the re-gasified natural gas into Europe’s industrial centres. Since February, the UK has become a giant land bridge for shipments of LNG helping Germany and the Netherlands in particular to replenish storage facilities. The full scale of this re-export business will only become clear in March 2023, but its likely value is approximately £6-8 billion. And in another fillip for UK power generation, the poor state of

⁴ Germany’s first emergency-build regasification terminal was completed at Wilhelmshaven in November. This will begin to dent Germany’s dependence on imports of gas from the Netherlands.

⁵ South Hook is the largest LNG terminal in Europe. Since the start of the Ukraine War, it has become one of the most vital pieces of energy infrastructure in Europe. It therefore has political as well as economic significance.

Simply put, the scale of UK oil and gas imports and exports – plus fluctuations in UK production – are now exerting a gigantic impact on headline figures for UK–EU trade, and indeed UK imports from the US and Qatar. Brexit is irrelevant to these flows. The causal factors are long-term disinvestment in the UK’s hydrocarbon industry, German industry’s dependence on natural gas, and diesel producing refineries based in the Netherlands necessitating the export of Brent crude and the import of refined diesel. To ignore these elementary observations when commenting on UK trade is inexplicable.

What’s more, these changing energy flows will also impact those comparative analyses that appear to show Post Brexit UK lagging other developed economies. For example, a Doppelgänger analysis for 2022 will show German GDP and exports falling in 2022 and 2023 as the high cost of gas has caused German factories to shut down or slow production.

In summary, oil and gas account for 14% of the total decrease in UK goods exports to EU countries between 2019 and 2021. But this downturn in headline exports has reversed rapidly in the 2022 data with oil and gas exports to the EU up 65% in 2022 on their 2019 values.

4. ONS SIC 32: Other manufactured goods

UK total exports in this sector fell by £2.9 billion between 2019 and 2021, bring the cumulative fall to £27.4 billion accounting for 56% of the total fall in UK exports between 2019 and 2021. Although exports to EU countries accounted for 48% of UK exports in 2019, they fell by £1.6 billion, 57% of the total sector export decrease. This sector saw only a slight recovery in 2022 and total exports are still 13% below their 2019 levels, while exports to EU destinations were 21% below their 2019 levels.

Although this may appear to be a Brexit related export reduction, this sector covers a lot of products including jewellery, musical instruments, sports goods, games and toys, medical and dental instruments and supplies, and other manufactured goods. The two biggest product sectors are medical and dental equipment and jewellery, together they make up just under 80% of exports in this sector. With the exception of Medical and Dental instruments, most of the goods in this sector are items that would be considered discretionary spending, so exports in this sector will be disproportionately hurt if importing countries are in a recession.

Medical and dental instrument exports to EU countries fell only slightly in 2020, rebounded in 2021 and have continued to grow in 2022. Jewellery exports to EU countries however, dropped by £1 billion or 58% between 2019 and 2021 and have remained low although exports to non-EU countries, which fell by 34%, have rebounded somewhat although they are still below their 2019 levels.

But before you jump to Brexit conclusions this is a great example of why trade figures shouldn’t be viewed in isolation. UK jewellery exports to the EU in 2019 were almost double their average exports over the previous 5 years, so the fall in 2020 was almost a reversion to the mean. Down about 10% but not the dramatic fall that the headline figures suggest. What caused this? Possibly stockpiling by most smaller EU countries, as the EU’s obligation to recognise UK hallmarks ended in Jan 2021 but any product already on the market before that date could still be legally sold. [Any new stock requires a new Common Control Mark](#) except Germany and Luxembourg who don’t require a hallmark, and France, Spain and Belgium who have their own systems of hallmarking.

As non-EU jewellery exports did not have a pre-Brexit stockpiling event, their dramatic fall in 2020 and 2021, down by over £1.2 billion, implies that Covid related restrictions and/or reduced discretionary spending during covid were the cause.

Other falls in this sector were in toys and games exports to EU countries which fell more than 50% from 2019 to 2021 and have only partially recovered in 2022 while exports to non-EU countries increased in 2020, 2021 and again in 2022. It is likely that the decrease in exports to EU countries is due to TCA Rules of Origin as many UK-labelled toys and games are now made in Asia.

This sector also includes sports equipment which likewise saw a decrease of 37% in exports to EU countries between 2019 and 2021 and fell further in 2022, while exports to non-EU destinations increased slightly. The most valuable exports in this sector are golf equipment. However, the continued fall in 2022 appears to be TCA Rules of Origin issue rather than due to Brexit friction as trade has increased in some EU countries while decreasing in others.

The Netherlands appears to have become the UK distribution hub for sporting goods: it increased its UK sporting goods imports by 172% in 2021⁶, while the UK's traditional markets: Germany, France, Ireland, Sweden, Spain and Italy have all seen large drops in imports.

⁶ ITC Comtrade data

5. ONS SIC 14: Wearing apparel

UK exports Wearing Apparel fell by £2.77 billion between 2019 and 2021. While exports to the EU accounted for 75% of UK exports in 2019, decreases in exports to the EU were £3.2 billion, larger in absolute terms than total export decreases. Thus, exports to non-EU countries increased while EU exports fell. Adding the decrease in this sector to the total, these five product sectors account for 62% of the total decrease in UK exports between 2019 and 2021 and for 75% of the decrease in exports to the EU in these sectors. However, unlike some of the other sectors reviewed there was no rebound in UK clothing exports during 2022.

Brexit is definitely responsible for the decline in EU exports of apparel as well as for the decline in UK imports of apparel from the EU but only because of the Rules of Origin in the UK EU Trade and Cooperation Agreement (TCA). Some clothing subsectors require the making-up, including cutting the fabric, to happen in the country of origin; others allow non-originating material to be up to 40% of the ex-works price. Either way this captures a lot of UK production which moved its manufacturing base many years ago.

British and European high-end clothing manufacturers can get around the TCA rules by importing semi-finished goods and adding expensive trimmings and buttons in their domestic markets. However, the UK's price sensitive, high-street clothing labels are less able to do this.

Most clothing is now fully or mostly manufactured in Asian, Middle Eastern or African countries, even if manufactured for UK designers and clothing companies. The UK's fashion industry is fundamentally about design, brand management, marketing and distribution, with manufacturing predominately in lower cost Asian or African countries. This is because manufacturing in developing nations is at least one order of magnitude cheaper than manufacturing in the UK. It would not be possible to pay UK statutory wages and benefits but still produce the very price-competitive *fast fashion* for which the UK is renowned.

That the drop in trade is due to the Rules of Origin and not trade friction is most obviously seen in UK imports. Between 2019 and 2022, UK imports of '84 clothing'⁷, measured in GBP, had increased from Myanmar by 44%, Pakistan by 33%, China by 20%, Morocco by 20%. While imports from Romania fell by 54%, from the Netherlands fell by 34%, from Italy by 13% and from Belgium by 11%. It would be naive to explain this as a sudden change in UK consumer taste. It is much more likely that items once regarded as EU imports because they were distributed from the EU importing country are now recorded as imports from their real place of manufacture. This is not a new phenomenon; clothing manufacturing has been moving out of Europe in general since the 1990s.

Between 2002–2022, UK apparel exports more than doubled to non-EU countries such as the US, South Korea, Israel, and Australia but exports to most EU countries have dropped dramatically since Brexit. For example, UK exports to most western EU countries have fallen by between 60% and 80% while most eastern EU countries have seen UK clothing exports fall by more than 90%. The only exceptions, where UK clothing exports increased was the Netherlands. The increase in exports to the Netherlands may just be the reverse Rotterdam effect where the Netherlands is acting as a fulfillment or distribution centre for UK clothing labels destined for other countries.

the UK clothing industry as a whole is still strong as manufacturing is a small part of the total industry revenue: design, marketing, distribution, wholesaling and retailing all receive much larger portions of the final sales price. However, trade figures don't measure this. But the point should be obvious: the drop in exports of Apparel – which has continued into 2022 – is either primarily or entirely due to the reclassification of traded items that were always made outside the UK and will have little effect on the UK economy.

6. ONS SIC 21: Pharmaceutical products and preparations

UK exports of Pharmaceuticals decreased by £2.57 billion between 2019 and 2021, bringing the cumulative total to 67% of UK exports decreases. However, although UK pharmaceutical exports to EU countries were worth 40% of UK total 2019 pharmaceutical exports, exports to EU countries fell by only £680 million equal to 27% to the total decrease between 2019 and 2021. This sector also rebounded in 2022 and while total exports are five per cent above their 2019 levels, exports to EU destinations were 20% higher than in 2019. The fall in exports in 2020 and 2021 was clearly not caused by Brexit.

The pharmaceuticals sector displays, again, a huge variation in export performance among markets in the EU. This shows why analysts should be hyper-cautious of blaming Brexit, since in many sectors, there is no uniform observable effect. For example, Belgium has become the UK's second largest EU market for pharmaceutical exports just behind Germany, with Belgium imports up over 280% between 2019 and 2022. Other EU markets such as Ireland, Germany and France saw increases of 38%, 27% and 23% respectively. Exports to the Netherlands were down slightly while exports to Spain dropped 49%, Italy dropped 52% and Sweden dropped 44%.⁸

From the trade data, it would appear that Belgium has become the main distribution hub for UK pharmaceuticals or pharmaceutical ingredients. Although this proves there were no unsurmountable Brexit related trade friction problems, there are multiple lessons to be learned from the recent history of UK-EU trade in pharmaceuticals.

⁷ ONS Trade in goods: Country by commodity exports, December 2022, current prices, non seasonally adjusted

⁸ ONS Trade in goods: Country by commodity exports, December 2022, current prices, non seasonally adjusted

Pharmaceutical Industry

UK–EU trade in pharmaceuticals was already in deep trouble pre-Brexit. And this is despite the amazing success of UK pharmaceutical exports at the start of the 2000s. From 2000 until 2010, the value of UK exports of pharmaceuticals more or less doubled.

But from around 2009–10 investment drifted overseas. Global manufacturers shifted production from the UK to elsewhere in the EU, including the Republic of Ireland, Belgium and the Netherlands. From that date onwards, the real-term value of UK's exports to the EU have either stagnated or fallen, and this trend has recently migrated to the UK's non-EU exports.

This can be seen in the charts below. Belgium, Germany and Spain have clearly benefited from Covid related pharmaceutical exports since 2020 but Ireland, Switzerland, Italy and Demark all increased their exports relative to 2010 long before the Covid epidemic. The stagnation in UK pharmaceutical exports was already apparent in 2016 but its inability to manufacture vaccines on a large scale became painfully apparent in 2020-21, when countries like Belgium greatly increased their exports.

Source: ITC COMTrade

If we remove the European countries who were the beneficiaries of Covid vaccine manufacturing, the movement of general pharmaceutical manufacturing away from the UK and to other EU countries becomes a lot clearer. *(See chart below)*

Source: ITC COMTrade

Despite its world-class pharmaceutical research industry, the UK is now – in terms of pharmaceutical manufacturing – the sick man of Europe. UK export growth to the EU stopped in around 2010. From that point onwards, the growth in UK-EU trade was all down to imports, as manufacturing shifted offshore.

The point for this analysis is that a fall in UK pharmaceutical exports in 2021 is part of a series of complex, long-term trends that began before the referendum. This trend involves investment in pharmaceutical manufacturing moving overseas from 2009-10 onwards and a dramatic increase in UK dependency on pharmaceuticals made in the EU.

One of the principal reasons for this shift in investment is Ireland's ability to turn itself into a world hotspot for investment by global pharmaceutical companies. The scale of the achievement is awe-inspiring. In just ten years, since 2010, Ireland has comprehensively overtaken the UK as an exporter of pharmaceuticals and made it Ireland's biggest export industry. The Republic now exports US\$25–30 billion of pharmaceuticals to the US each year – which is about double what the UK has ever managed to export to the entire EU. And that statistic is worth contemplating. When so much energy is being expended on proving Brexit-related damage to UK trade, it should be pointed out that Ireland's biggest single export success story of the past decade owes nothing to either the Customs Union or the Single Market.

What's driven this success? In the view of most industry stakeholders, Ireland's dedication to providing a low-taxation jurisdiction for pharmaceuticals companies – and pharma manufacturing – has triggered a wave of investment. However, lower overall exports for pharmaceuticals can hardly be blamed on Brexit when lower exports are part of a long-term trend that began in 2010. Nor are the Customs Union and Single Market decisive factors in export growth in this industry – a point that has been irrefutably demonstrated just across the Irish Sea.

And this trend is unlikely to change with the recent announcement that AstraZeneca has decided to build its new £320 million pound production facility in Ireland rather than in Macclesfield, Cheshire as previously planned because of the UK's "discouraging" corporate tax rate. Lower UK production means lower UK exports.

7. ONS SIC 24.4 Basic precious & other non-ferrous metals

*UK exports in this sector fell by £2.07 billion between 2019 and 2021, bringing the cumulative total to 71% of total UK export decreases between 2019 and 2021. Exports to EU countries accounted for 17% of all UK exports in this sector in 2019 and **increased by £1.6 billion** during covid and have continued to increase in 2022. While UK exports to non-EU countries fell by £3.6 billion between 2019 and 2021 equal to a drop of 18% of their 2019 level. This was clearly nothing to do with Brexit.*

Although this sector is often excluded from trade figures as it is dominated by precious metal values, According to the ONS, other basic and non-ferrous metals made up about 40% of the extraordinarily large export values in 2022. I include it here because it is not always clear whether commentators claiming that Brexit has hurt UK trade have included it in their statistics. And because this is a real export industry, according to the ONS the UK exported £9.3 billion of non-ferrous metals in 2019 including aluminium, copper, nickel, and lead, although mainly as either scrap or unwrought metal. The UK also exports other base metals such as titanium, cobalt, chromium, molybdenum, tungsten and magnesium. Although the fall in exports in 2020 and 2021 was clearly due to China's lockdown, which saw their gold imports virtually disappear.

[According to ITC/Comtrade](#), the biggest drops in copper exports in 2020 were to China, this was probably due to covid lock downs and high shipping costs. Similarly, the biggest drop in nickel exports were to the US. Exports of aluminium fell to German, India and the US while exports of titanium fell to France, the US and Germany all probably due to factory closures during Covid.

[According to the ONS](#), exports of non-ferrous metals to all destinations have rebounded strongly in 2022 to £18.5 billion, as have exports of precious metals £32 billion. India, which imported only £0.83 billion of non-ferrous metals in 2019, became the UK's largest market in 2022 importing over £3.4 billion. UK exports to Canada and Turkey have also seen surprisingly large growth in this sector. The graph below clearly shows the fall in exports and rebound were not about Brexit as exports to the EU hardly changed.

8. ONS SIC code 26: Computer, electronic & optical products

UK exports in this sector fell by £1.99 billion between 2019 and 2021, bringing the cumulative total to 75% of total UK export decreases between 2019 and 2021. Exports to EU countries accounted for 47% of all UK exports in this sector in 2019 but for only 38% of the decrease in UK exports. Exports to EU countries fell 6% between 2019 and 2021 but exports to non-EU countries fell 8%. Exports to EU countries were 5% above their 2019 levels at the end of 2022, while non-EU exports were up only 2%.

However, there is evidence that the distribution patterns of these products into EU countries has changed. The UK's largest EU export market in 2019, Germany, increased its imports of electrical machinery between 2019 and 2021 and exports to Germany continued to grow in 2022. As did exports to the Netherlands. The Netherlands was the UK's 4th largest market for electrical machinery in 2019 but became the UK's second largest market in 2021 and continued to grow in 2022. It is likely that the Netherlands has become an EU distribution hub for this sector. Exports also increased dramatically to other smaller EU countries such as Slovakia and Estonia, both appear to have been unaffected by either Brexit or Covid. While exports to most other EU countries fell.

In general, *computer, electrical & optical products* is not a growth sector for UK trade, at least not at the consumer level. UK exports in this sector are still almost half their pre-digital 2006 peak and after 15 years of slow growth, export values are almost back to their nominal 1997 values. But this has been achieved by increasing trade with non-EU countries and in subsector 26.5: *Measuring, testing and navigation equipment; watches and clocks*. Even in these products, exports to non-EU countries have grown considerably faster than exports to EU countries.

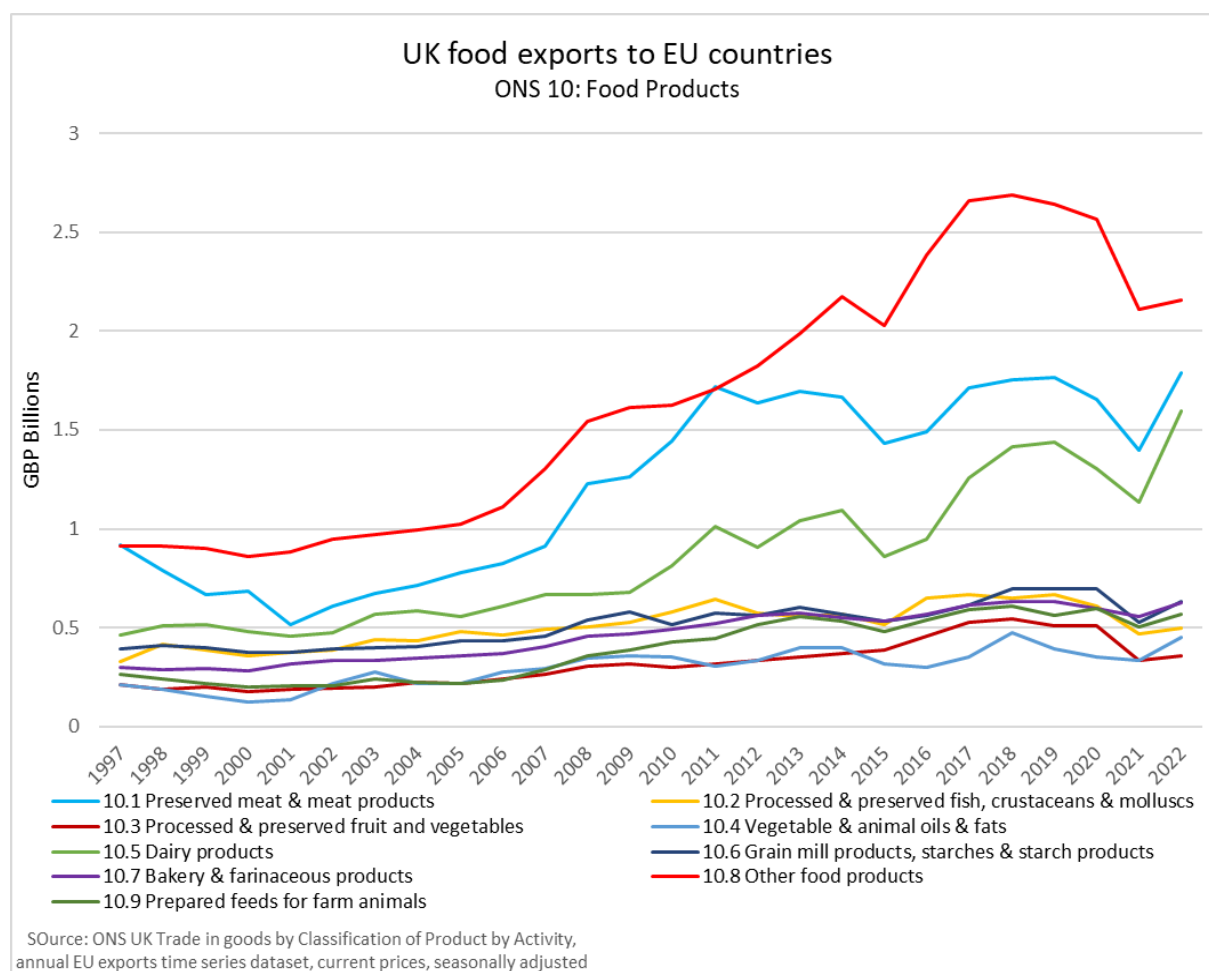
Could the UK have prevented its stagnate export grow in the other products in this sector? Probably not. Consumer electronics, computers and phone production moved to Asia long ago and they are unlikely to return but the government should be promoting precision instrument production and exports, as the figures suggest the UK has a comparative advantage in this product area.

9. ONS SIC 10: Food Products

UK exports in this sector fell by £1.5 billion between 2019 and 2021, bringing the cumulative total to 78% of total UK export decreases between 2019 and 2021. Exports to EU countries accounted for 69% of all UK exports in this sector in 2019 but decreased by £1.94 billion between 2019 and 2021. Exports to non-EU countries went up by £0.44 billion between 2019 and 2021. Exports in most products in this sector have rebounded in 2022 and the sector as a whole is back to 2019 levels although exports to EU countries are still 7% below 2019 levels.

Most will conclude that this is clear evidence of Brexit trade friction however this sector covers many products and there is clear evidence of stockpiling of UK exports by EU customers during 2019 and 2020 in manufactured products with longer shelf lives or products that have been preserved or that can be frozen. Stockpiling was a sensible response when the UK threatened to leave the EU without a trade deal in 2019: the EU has extremely high tariffs on food imports, which would have made much of this trade uneconomic. There was more stockpiling at the end of 2020, as the Transition Period finished, in order to avoid any delays at the boarder due to unfamiliar customs regulations. This can be seen in the graph below, 10.8 other food products includes sugar production, chocolate confectionary, tea, mustard, soups, baby food and baby formular: all easily stored.

But if there was border congestion in early 2020, for most products that would appear to have been overcome as exports to the EU have rebounded in almost all categories, with dairy product exports to EU countries now considerably higher than their 2019 values.



10. ONS SIC 90 and 91: Paintings & sculptures and Antiques & collections

Total Exports fell by £1.47 billion in these sectors but exports to EU countries increase by just under a billion pounds. Exports to the EU are generally small and made up only 2% of total UK Art exports in 2019 but increased enormously in 2021 and were worth a third of total UK art and antique exports. Exports in this sector increased in 2022 from its 2020 and 2021 lows although they are well below their 2019 highs. Meanwhile 2022 exports to the EU were up 459% from their 2019 levels. The fall in exports in 2020 and 2021 was clearly not caused by Brexit.

This sector shows why trade analysts should be exceptionally cautious when dealing with headline trade data, and year-on-year comparisons. During covid this sector saw a dramatic fall, most probably due to art gallery and auction house closures, which contributed mightily to the overall drop in trade blamed on Brexit, even though it definitely had nothing to do with Brexit or even the EU.

Traditionally the US is by far the UK's largest buyer of art and antiques, followed by Switzerland, then Hong Kong. Unusually France bought more goods in these product codes in 2021 than Hong Kong. Although non-EU exports were clearly growing again in 2022.

11. ONS SIC 28: Machinery and equipment n.e.c.

UK exports in this sector fell by £1.28 billion between 2019 and 2021, bringing the cumulative total to 84% of total UK export decreases between 2019 and 2021. Exports to EU countries accounted for 43% of all UK exports in this sector in 2019 but for only 32% of the decrease in UK exports. Exports to EU countries in 2021 were 3% below their 2019 levels but exports to non-EU countries were 5% lower. While exports to both EU and non-EU countries were 8% above their 2019 levels at the end of 2022.

This is one of the UK's larger export sectors and makes up about 10% of all UK exports by value and is vital to UK trade. It includes world-class products like JCB excavators and Wier Group pumps. Exports fell heavily in 2020 most probably due to international covid related factory closures but recovered most of this fall in 2021. It is also worth pointing out that since 2008, exports to non-EU markets have outperformed exports to EU markets by about between 25% to 30%. But even these healthy export figures don't include machinery made for UK brands in factories outside the UK. JCB for example has factories in the US, Brazil, India, and China as well as in the UK.

But, needless to say: a sector where UK exports to non-EU destinations fell more than exports to EU countries in 2020/21, can hardly blame its woes on Brexit.

12. ONS SIC 15.2: Footwear

UK total exports of Footwear fell by just under £1 billion between 2019 and 2021. Exports to the EU accounted for about 85% of UK footwear exports in 2019, and they fell by £1.1 billion, while non-EU exports increased by £0.1 billion. As we have just seen with Clothing, this is more likely to be due to the Rules of Origin in the UK EU Trade and Cooperation Agreement (TCA) rather than to any Brexit trade friction or a massive change in EU consumer tastes. This sector has not recovered in 2022.

Again, the changes caused by the TCA Rules of Origin are most obviously seen in UK imports. Between 2019 and 2020, **UK imports** from the Netherlands and Belgium were down over 60%, imports from France down 42% and from Italy down 29%. Although many UK shoe shops were closed during covid, footwear imports from these EU countries have not bounced in 2022. That is except for Belgium from whom the UK imported 50% more footwear in 2022 than it did in 2019. This is unlikely to be a sudden change in consumer taste away from European shoes but simply a reallocation of imports, and import tariffs, to the true manufacturing country – China, Vietnam, and Indonesia.

At the same time, **UK exports** of footwear increased to South Korea (up 267%), Switzerland (up 46%) and China (up 55%) but decreased to every EU country except Belgium (+3%) which again, is most likely to be acting as an EU distribution centre for UK Footwear labels that are actually made, or the majority of their value is made, in the UK.

In terms of manufacturing, footwear is a similar story to apparel. Pre Brexit, up to 88% of UK footwear exports registered as exports to EU countries. But this dropped to 61% in 2021, with all EU countries recording import falls between 2019 and 2021 except Belgium whose imports were unchanged. UK Footwear exports were down 73% in Germany, and down 70% in France and Ireland, (Pre- Brexit these countries were the UKs largest markets that were not known distribution-hubs) while there were massive drops in UK exports of 95% to Hungary, Slovakia, Croatia, Estonia, and Slovenia.

UK footwear exports remained low or fallen further to EU countries in 2022 with the exception of the Netherlands which has return to 2019 values and Ireland which saw a small bounce in 2022 but still about 40% of 2019 values. I assume the Netherland has become a distribution centre for other continental EU countries while exports to Ireland are most likely actual end user sales.

It is possible that the dramatic increase in UK exports to Switzerland, South Korea, China, Kuwait, UAE, Israel, Saudi Arabia, and Taiwan between 2019 and 2021 are also recording issues. It is likely that some portion of UK made footwear, previously recorded as being exported to the EU, has always been simply on route to these countries via Rotterdam's cargo terminals or via road in the case of Switzerland. However, total footwear exports have not recovered in 2022 showing that for the most part, footwear manufacturing is outside the UK and these exports will no longer be counted as UK exports.

The sectors discussed so far account for 82% of UK total export decreases between 2019 and 2021. This means that most of the fall in exports simply doesn't fit the consensus view that Brexit negatively impacting the UK economy through lower trade. In this case, it is merely producing some lower, but more accurate, trade statistics.

13. ONS SIC 27: Electrical equipment

UK total exports of Electrical equipment fell by £810 million between 2019 and 2021. Exports to the EU accounted for just under 50% of UK exports in 2019, and they fell by £500 million, or 61% of the total export decrease in this sector. While non-EU exports fell by only £320 million. However, exports to both EU and non-EU destinations have bounced in 2022 and are both just above their 2019 levels.

This sector covers electric motors and electricity distribution and control, batteries and accumulators, wiring and wiring devices, electric lighting equipment and domestic appliances as well as other electrical equipment. It would be hard to blame the fall in exports between 2019 and 2021 on Brexit trade friction as exports to some EU countries increased during this period, notably Germany (+11%) and the Netherlands (+24%), even though exports fell to most other EU countries. In 2022 exports to both Germany and the Netherlands grew even more, Ireland and France recovered somewhat but exports to most other EU destinations remained near their 2021 levels. Admittedly Germany was already the UK largest export markets in the EU while the Netherlands has moved from fourth place to second and is most likely acting as a distribution hub for UK exports to other EU markets.

14. ONS SIC 22: Beverages, spirits and vinegar

UK exports in this sector fell by £650 million between 2019 and 2021 bringing the cumulative total to 89% of UK exports decreases. Although 37% of UK exports went to EU countries in 2019, exports to the EU fell by £370 million accounting for 57% of the total decrease in UK beverage exports. This sector also rebounded in 2022. Total exports are 16% above their 2019 levels, exports to EU destinations were 4% higher than in 2019.

This sector is weighted towards higher value whisky and gin which is generally considered discretionary spending so exports to the EU may be slow to recover. While the UK's largest non-EU market is the US whose import purchases would have benefited from the advantageous US UK exchange rate during the latter part of 2022.

Initially in 2020 exports to non-EU markets fell much more than to EU markets presumably due to Covid restriction. But many non-EU markets bounced back in 2021, greatly reducing their 2019 to 2021 fall; meanwhile EU markets did not bounce back.

Before we jump to Brexit conclusions it's worth noting that some EU markets such as Spain, Portugal, Greece, Cyprus, and Croatia saw decreases in 2021 of between 18% and 41% on their 2019 imports. While exports to Latvia, Poland, Belgium, Romania and Lithuania increased by between 10% and 33%.

As the markets showing the largest falls are all holiday destinations popular with UK tourists, this fall in exports is likely to be due to Covid travel restrictions as well as bar and restaurant closures during 2020 and 2021, rather than Brexit.

However, exports to both EU and Non-EU countries have rebounded in 2022, as can be seen in the graph below. This destroys the idea that trade friction is the cause of export declines to the EU during 2020 and 2021.

15. ONS SIC 8.9: Mining & quarrying products n.e.c.

UK exports in this sector fell by £460 million between 2019 and 2021 bringing the cumulative total to 90% of UK exports decreases. All of this fall was in exports to EU countries although they only account for 88% of UK exports in this sector. This sector has bounced very slightly but is unlikely to recover.

This sector includes extraction of peat as well mining of salt and fertiliser minerals. I do not claim to know what happened here, but the graph below appears to be of a dying industry, and it appear to have died in 2011. It would be very hard for anyone to seriously blame this fall on Brexit related trade friction. More likely it was the phasing out of peat extraction in the UK.

16. ONS SIC 13: Textiles

UK total exports of Textiles fell by £450 million between 2019 and 2021 bring the cumulative total to 91% of UK export decreases. Exports to the EU accounted for about 64% of UK textile exports in 2019, and they fell by £390 million, accounting for 84% of total export falls in this sector. This sector has not recovered in 2022.

As we have just seen with *Wearing apparel* and *Footwear*, this export decrease is more likely to be due to the TCA Rules of than to any Brexit trade friction or a massive change in EU consumer tastes. And like clothing and footwear exports to EU countries, Textile exports have not recovered in 2022, and remain 19% below their 2019 levels.

So, this fall in exports was not caused by Brexit trade friction but by more accurate trade measurement.

17. ONS SIC 1.1: Non-perennial crops

UK exports in this sector fell by £450 million between 2019 and 2021 bringing the cumulative total to 92% of UK export decreases. Exports to EU destinations accounted for 79% of UK exports in 2019 but for 84% of this decrease. At first glance this may appear to be Brexit trade friction but with Agricultural goods export volumes are dependent on crop yields. Crop yields are dependent on planting decisions and the weather. 2022 had both high prices for oilseeds, soybeans, and wheat due to the war in the Ukraine. 2022 also had good weather provided UK farmers had enough stored water. So, UK exports to the EU were almost 9% higher than in 2019. Although non-EU exports remained below 2019 levels.

Variations in agricultural export volumes are mainly due to variations in UK yields and importing country yields. For example, in 2019 the UK produced a large cereal crop and consequently exports were also high. However, 2021 production was lower so there was less for exports. Nevertheless, in total the UK is a large net importer of non-perennial crops – not an exporter, as can be seen in the chart below.

According to Defra's [Agriculture in the UK 2021](#): UK wheat production was 16.2 million tonnes in 2019 but fell to only 14 million tonnes in 2021, consequently exports to the EU fell from 1 million tonnes in 2019 to 0.3 million in 2021. Similarly, UK barley production was 8 million tonnes in 2019 but only 7 million in 2021, down 1 million tonnes, consequently, exports to EU countries were down by 900,000 tonnes and to non-EU countries by 100 thousand tonnes. While UK rapeseed production fell from 1.75 million tonnes in 2019 to only 980 thousand tonnes in 2021 although this was due to a smaller area being planted but even still, exports fell to only 25 thousand tonnes. If domestic production is low, the available crop is kept for domestic use as this usually gives the highest returns.

This sector can also have unexpected trade patterns. For example, in 2019 the UK exported barley worth £3 million to Lithuania – Lithuania does not usually buy any UK barley. These one-off purchases of agricultural products, possibly due to a poor domestic harvest, can greatly distort trade statistics.

This sector also includes rice. The fall in rice exports in 2021 is most likely entrepot trade as the UK does not grow rice but does have a rice milling industry. So, any UK rice exports still recorded as UK exports will have been imported as husked rice and milled in the UK before being exported.

18. ONS SIC 23: Other non-metallic mineral products

UK exports in this sector fell by £350 million between 2019 and 2021 bringing the cumulative total to 92% of UK export decreases. Exports to EU destinations accounted for 64% of UK exports in 2019 but for 90% of this decrease. Exports in 2022 were higher than in 2021 but still below 2019.

At first glance this may appear to be Brexit trade friction, but exports to EU destinations have rebounded somewhat in 2022 and were just 6% lower than their 2019 export values. As this sector includes glass, cement, concrete, bricks etc., the falls in exports in 2020 and 2021 are more likely explained by construction site closures during covid. But this is not a major export sector for the UK.

19. ONS SIC 17: Paper and paper products

UK exports in this sector fell by £320 million between 2019 and 2021 bringing total export decreases to £45.52 billion or 93% of all sector decreases. The EU accounted for 70% of UK paper and paperboard exports in 2019 but 86% of the decrease in exports. However even this is not due to Brexit as exports have rebounded in 2022 and are now 8% above their 2019 values for exports to EU destinations while exports to non-EU destinations are back to their 2019 values.

As we have seen in other sectors, paper and paperboard exports to most EU countries fell between 2019 and 2021, with the exception of the Netherlands where exports of paper and paperboard increased by 86% and Belgium where they increased by 11%. However, during 2022, exports in this sector have rebounded to Ireland, Germany, and France, which were the UK's main EU markets pre-Brexit.

Nonetheless, the UK is not a force in this market: Chinese exports in this sector have grown from almost nothing 20 years ago to become the world's biggest exporter, exporting \$24 billion in 2021.

This is now more than Germany (\$23 billion), the US (\$15 billion) or Canada (\$7 billion), the three countries that once dominated this market.⁹

So, while I expect UK exports to remain within their recent trading band of around £2.5 billion this is not an export industry to be concerned about.

20. ONS SIC 31: Furniture

UK exports in this sector fell £200 million between 2019 and 2021 bringing total export decreases to £45.72 billion or 93% of all sector decreases. Although the EU accounted for only 64% of all UK exports in this sector, exports to the EU fell by £180 million 91% of the total sector fall. Exports to both EU and non-EU countries recovered in 2022 but exports to EU destinations are still 7% below their 2019 levels.

However, this is also unlikely to be Brexit related. Between 2019 and 2021 exports of consumer furniture were higher to France, Denmark, Czechia, Portugal, Slovakia and Luxembourg. Exports of intermediate furniture were higher to Belgium, the Netherlands, Romania, Lithuania, Bulgaria, Luxembourg, Greece, Hungary, Slovenia, Estonia and Cyprus. While exports of Capital Furniture were higher to France, the Netherlands, Czechia, Sweden, Belgium, Cyprus and Lithuania. As these EU countries were able to import UK produced furniture – despite Brexit and Covid – we can see that trade friction was not the problem. If it were, all EU countries would have been affected equally.

However, it is likely that much of the furniture that the UK exported to Ireland was always made or landed in the EU and simply driven across the UK's land bridge to Ireland. Or landed in a UK port as the largest ship to visit Cork Container port was the 230-meter long *MV Northern Dedication*, while Felixstowe can accommodate the world's largest containers ships that are up to 400 meters long.

⁹ ITC COMTrade data

As UK furniture exports were also lower to the US, the UK's largest market, and to Hong Kong and the UAE, the fall in UK furniture exports is likely to be lockdown related with the added problem of extremely high shipping costs after lockdowns were lifted.

This sector includes office seats, hotel and restaurant furniture as well as theatre and cinema seats. All places that were closed for most of 2020 and 2021 due to covid lockdowns. Considering the working from home revolution, coupled with Netflix/Apple/Amazon television and the growth in food delivery services, there was a chance that this sector may not revive. However, the figures for 2022 show that all of the EU countries listed above increased their UK furniture imports in 2022 and several other EU countries whose imports were lower in 2021 rebounded in 2022. This was also true for exports to the US, UAE, China and Hong Kong for consumer furniture, as well as for US, Swiss, Saudi and Australian imports of capital furniture.

NO SIGNIFICANT IMPACT FROM BREXIT SUMMARY

The cumulative fall in the value of UK exports between 2019 and 2021 in the 20 product sectors analysed above was £45.7 billion. This £45.7 billion fall is equivalent to 93% of the total £49 billion fall in sectors that experienced a reduction in UK exports between 2019 and 2021. The decrease in exports to EU countries in these 20 sectors fell by £18.2 billion accounting for only 40% of the total decrease even though exports to EU countries accounted for 45% of UK exports in these sectors in 2019. The remaining, unaccounted-for export falls (c. 7%) are scattered amongst various sectors.

From this analysis almost all of the fall in UK exports to the EU should be attributed to factors that were either entirely unrelated to Brexit (oil and petroleum); almost entirely unrelated to Brexit, (vehicles); sectors where the goods that are exported appear primarily to be made outside the UK (apparel and footwear); sectors where long-term trends in disinvestment and structural change predate Brexit (pharmaceuticals and electrical goods); industries disproportionately impacted by the Covid pandemic (aerospace); or due to lower production (non-perennial crops)); or pre-Brexit stockpiling (Food products). In two sectors exports to EU countries increased while exports to non-EU countries fell. And in many sectors exports increased to some EU countries while decreasing to others thus undermining a trade friction cause.

Yet UK exports were simply viewed as a lump sum by many declinist commentators and any decrease was deceitfully blamed on Brexit. A balanced commentator should have researched what the UK exports and how these exports were affected by Covid lockdowns and travel restrictions or government taxation and environmental regulations before leaping to Brexit-related conclusions. And this was easily done by comparing exports to non-EU countries with exports to EU countries as I have done in this analysis.

Most of the fall in 2021 exports to the EU is inherently short term and is almost entirely unattributable to Brexit. In 2022 exports increased in all but two sectors – clothing and footwear which is definitely attributable to Brexit but only in the way we now measure trade data, since most clothing and footwear has not been made in the UK for many years even if it is made for a UK based label, and so the reattribution of export statistics will make no change to the UK's economy.

Nevertheless, the dramatic fall in exports of aerospace, auto and fuel-related goods helps explain why UK trade has bounced back more slowly than in other countries; something that both the *Financial Times* and the BBC have dwelt on. It's the UK's export mix. Other countries' exports were not so concentrated in sectors that were disproportionately impacted by the pandemic. Civil aerospace constitutes a far greater share of UK manufacturing exports compared to, say, Germany.¹⁰ And unlike in the US, whose largest export sector is now hydrocarbons¹¹, the UK's biggest goods export sector is vehicles, and this sector is reliant on international supply chains for key components.

This concludes the sectoral data-analysis section of the paper. The table on the next page compiles all the principal data, including the overall value of the fall in exports for each sector. The next section of this paper looks at the food trade in dept, then the future for UK trade and finally how trade policy could improve UK trade prospects.

¹⁰ The US International Trade Administration: Germany – Country Guide. The ITA estimated that the size of the UK aerospace and defence market in 2020 at US\$90.2 billion (including land systems), with Germany's at US\$35.4 billion. The UK is not a major land systems exporter. [Link](#)

¹¹ According to the official BEA site, US exports of 'other petroleum products' increased by US\$25.2 billion in 2021; exports of natural gas increased by US\$21.2 billion; and exports of crude oil increased by US\$19.9 billion. This data alone explains why US trade revived more quickly than in the UK in 2021; in contrast UK hydrocarbon production and exports both plunged in 2021. [Link](#)

Export summary sheet

ONS SIC Code	ONS Sector Name	Total UK Exports in Sector				Possible Covid or Brexit decrease	Cumulative total export decrease	% of total export decrease 2019-21	2022 Rebound from 2021	2022 exports compared to 2019	Sector Exports to EU Countries				Possible Covid or Brexit decrease	2022 Rebound from 2021	EU % of total 2019 exports	EU % of 2019-2021 export decrease	Brexit effect index*	Reason for decrease in Exports
		2019	2020	2021	2022						2019	2020	2021	2022						
29	Motor vehicles, trailers & semi-trailers	41.83	30.13	31.88	34.31	-9.95	-9.95	-20%	8%	-18%	18.53	12.99	13.16	14.17	-5.36	44%	54%	1.22	Temporary key component shortage	
30.3	Air & spacecraft & related machinery	35.22	25.04	24.61	33.45	-8.62	-18.56	-38%	26%	-5%	12.11	8.15	11.53	13.32	-0.58	34%	7%	0.20	Covid related travel restrictions	
6 & 19	Crude & refined oil, gas and coke	37.57	24.08	31.66	55.54	-5.91	-24.47	-50%	75%	48%	22.88	15.47	20.32	37.79	-2.55	61%	43%	0.71	covid related lockdowns and travel restrictions	
32	Other manufactured goods	12.43	9.56	9.51	10.86	-2.92	-27.39	-56%	14%	-13%	5.92	4.65	4.26	4.69	-1.67	48%	57%	1.20	varied some TCA Rules of origin effect	
14	Wearing apparel	7.22	6.66	4.45	4.23	-2.77	-30.16	-62%	-5%	-41%	5.39	4.70	2.17	2.12	-3.21	75%	116%	1.56	TCA Rules of Origin	
21	Pharmaceutical products & preparations	24.19	22.61	21.62	25.92	-2.57	-32.73	-67%	20%	7%	9.72	10.32	9.04	11.65	-0.68	40%	27%	0.66	No Brexit effect, full rebound	
24.4	Basic precious & other non-ferrous metals	24.29	25.53	22.22	51.25	-2.07	-34.80	-71%	131%	111%	4.08	5.51	5.63	6.65	1.55	17%	0%	0.00	No Brexit effect	
26	Computer, electronic & optical products	28.22	25.03	26.23	28.83	-1.99	-36.79	-75%	10%	2%	13.32	12.01	12.57	13.94	-0.75	47%	38%	0.80	No Brexit effect, full rebound	
10	Food products	13.49	13.28	11.99	13.64	-1.50	-38.29	-78%	14%	1%	9.31	8.89	7.37	8.67	-1.94	69%	129%	1.87	Various - some stockpiling EU exports have rebounded in 2022	
90 & 91	Art and Antiques	5.27	3.00	3.80	4.84	-1.47	-39.76	-81%	28%	-8%	0.25	0.16	1.18	1.38	0.93	5%	0%	0.00	No Brexit effect	
28	Machinery & equipment n.e.c.	33.56	29.28	32.28	36.33	-1.28	-41.04	-84%	15%	8%	14.39	12.34	13.99	15.59	-0.41	43%	32%	0.74	No Brexit effect, full rebound	
15.2	Footwear	1.92	1.77	0.95	0.79	-0.97	-42.02	-86%	-16%	-59%	1.66	1.42	0.57	0.50	-1.09	86%	112%	1.29	TCA Rules of Origin	
27	Electrical equipment	12.42	11.25	11.60	12.51	-0.81	-42.83	-87%	8%	1%	6.08	5.29	5.58	6.21	-0.50	49%	61%	1.24	Various - some component shortage exports have rebounded	
11	Beverages	8.35	6.85	7.70	9.72	-0.65	-43.49	-89%	26%	16%	3.07	2.66	2.70	3.20	-0.37	37%	57%	1.56	Covid related hospitality sector closures and travel restriction	
8.9	Mining & quarrying products n.e.c.	0.61	0.11	0.14	0.17	-0.46	-43.55	-90%	21%	-71%	0.54	0.06	0.07	0.09	-0.47	88%	101%	1.14	Closure	
13	Textiles	2.78	2.59	2.33	2.50	-0.45	-44.40	-91%	7%	-10%	1.78	1.68	1.39	1.44	-0.39	64%	87%	1.36	TCA Rules of Origin	
1.1	Non-perennial crops	1.12	0.94	0.67	1.15	-0.45	-44.85	-92%	72%	3%	0.88	0.70	0.51	0.96	-0.38	79%	84%	1.06	2019 had high yields and exports	
23	Other non-metallic mineral products	2.85	2.44	2.51	2.79	-0.35	-45.20	-92%	11%	-2%	1.82	1.56	1.51	1.72	-0.31	64%	90%	1.41	Covid closure of construction sites in EU, sector has rebounded in 2022	
17	Paper & paper products	2.59	2.39	2.27	2.73	-0.32	-45.52	-98%	20%	5%	1.82	1.67	1.54	1.96	-0.28	70%	86%	1.23	Industrial trends predating Brexit	
31	Furniture	1.41	1.12	1.21	1.49	-0.20	-46.72	-98%	25%	6%	0.90	0.73	0.72	0.84	-0.18	64%	91%	1.43	Covid related, sector rebounded in 2022	

Source: ONS UK Trade in goods by Classification of Product by Activity, time series dataset, Quarterly and Annual up to and including 2022 Q4 * Index >1 indicates possible Brexit effect on the fall in exports between 2019 and 2021

The reality of UK food and agriculture exports

One advantage of this sectoral approach is that analysts can see whether Brexit really has impacted UK trade. My results often don't correlate with the media attention orchestrated by well-funded public relations campaigns. The UK food and agriculture exports receive a disproportionate amount of publicity considering that the UK is a large net *importer* of food from the EU, while exporting relatively small values of food and agricultural products. And so, the UK food industry deserves particular focus.

The UK's dependency of foreign food

The UK saw a reduction in most UK food exports to the EU in 2021 after the transition period finished but not in food imports from the EU. One reason was the way the UK EU TCA was implemented by the two signatories. The UK did not check EU food imports as they still rely on EU food imports to feed their population. It would have been disastrous if food imports were held up at the border before the UK has established trading relationships with other food exporting nations¹². Conversely the EU, as a large net exporter of food, were quick to protect their producers by implementing border checks on UK food and agricultural products. Both sides were acting in the best interests of their populations.

While unequal border checks probably lowered UK exports, there were other statistical aberrations, such as one-off exports, stockpiling and yield variations, that have made the decrease in UK food exports after Brexit appear to be much worse than they are.

However, the downturn in food exports to the EU in 2021 should not alarm analysts. Careful quarterly analysis of ITC data to the third quarter 2022, shows most food exports have returned to their pre-Brexit value levels, as can be seen in the graph below.

In case you are wondering about the graph above: '*Miscellaneous edible preparations*' includes mustard and condiments – one of the two largest exports in this subsector; '*Preparations of flour etc*'

¹² This process is happening now, but it will take 16 years before EU imports see any real competition.

includes biscuits and cakes, which comprise by far the largest export group in this subsector, the second largest is breakfast cereals; '*cocoa preparations*' are mostly chocolate; '*preserved meats and fish*' includes smoked salmon as well as sausages¹³.

Also, on the graph above we see many UK food products experienced exceptionally high exports to the EU towards the end of the Brexit transition period, December 2020. I assume this was to avoid any initial port congestion at the beginning of 2021. Similar stockpiling happened at the beginning of 2019 in case of a 'no-deal' Brexit. Both were possible because most UK food exports have long self-lives, being either preserved or manufactured or able to be frozen.

The trade data does imply there was a large amount of stockpiling of both cheese and butter during the first quarter of 2019 in case the UK left the EU without agreeing a trade deal. If this had happened, relatively low-priced dairy products would have incurred extraordinarily high tariffs from the EU. This stockpiling of exports of UK cheese and butter – the dairy products most easily stored – can be seen in the graph below. So, rather than Brexit causing lower dairy exports, butter and cheese exports may simply have been reverting to more usual export levels in 2021.

It is now obvious that any Brexit teething problems have been solved. In subsectors where food is either wholly or mostly manufactured in the UK, exports have returned to pre-Brexit levels. However, the unusually high exports at the end of 2020 due to stockpiling is still distorting trade statistics.

¹³ Despite press attention, even before Brexit the UK exported less than £30 million of sausages globally. The UK's largest sausage export market in 2018 was Qatar, worth £10 million and over a third of UK total exports, while in 2019 UK sausage exports to Qatar were £9 million. However, in 2020 sales to Qatar fell to £2.2 million and to just £22,000 in 2021. This was probably due to Covid travel restrictions, but certainly not Brexit. Meanwhile sausage exports to Ireland only fell from £10.8 million in 2020 to £7.9 million in 2021. By weight, sausage exports to Ireland were higher in 2021, 2831 tonnes, than in 2019, 2554 tonnes. (*ITC COMTrade data*)

Home-grown versus tropical

Only in food exports that are grown outside the UK and receive little or no processing in the UK, do we see a permanent drop in exports, or more accurately, a permanent drop in UK export statistics.

This is especially obvious in fruit and nut exports which were always simply entrepot trades. For hundreds of years the UK has imported bananas, citrus and tropical fruits from its Commonwealth trading partners and re-exported them to other EU countries. Now they are correctly classified by the EU as non-UK imports. Unless these products are peeled, shelled, diced or roasted in the UK to add some UK value they can no longer be classified as UK exports. Consequently, total exports in the fruit and nut subsector more than halved between 2020 and 2021 from £283 million to £120 million. This sudden drop is made up of:

- UK exports of bananas dropped from £19.3 million in 2020 to only £1.0 million in 2021;
- UK exports of citrus fruit dropped from £33.8 million in 2020 to £2.5 million in 2021;
- Coconuts, Brazil nuts and cashew exports dropped from £21.4 million to £9.7 million;
- Dates, figs, pineapples, guavas and mangos exports dropped from £44 million to £25 million;
- While exports of 'Other nuts', which would include some that are possible to grow in the UK such as walnuts, also dropped from £22.7 million to £16.0 million.

For the avoidance of doubt, the UK's Department for the Environment, Food and Rural Affairs (Defra) only records UK commercial production of apples, pears, strawberries, raspberries, and blackberries. Almost all other fruit and nuts available in the UK are imported.

On that note, UK exports of subsector 0810: berries, to EU countries were only £11.4 million in 2021¹⁴, about a third of their record exports of £33.6 million in 2020¹⁵ yet 46% higher than UK berry exports to EU countries in 2016 (£7.8m). Although the press attention is on Brexit as the cause of all export problems, we shouldn't forget that Covid lockdowns continued in 2021 and included restaurant closures in many countries. This will have hurt high end food exports that are often used by the hospitality sector rather than retail outlets – such as British strawberries.

Other Factors that influence agri-exports

Additionally, some unusual one-off UK agricultural exports in 2019 may cause some analysts to jump to 'Brexit Bad' conclusions when they compare 2019 exports with 2021, especially if they don't look at a country's import levels of UK products prior to 2019.

Agricultural trade is determined by importer demand like any other. Many countries only need to import agricultural products if their stock was hit by a disease or they suffered a poor harvest, for example China's purchases of UK pork in 2019 and 2020 after their domestic pig herd was reduced by an outbreak of swine flu¹⁶. This possibly also caused Germany to import an unusually large amount of UK ham in 2019 after some of their domestic pork supplies were also sold to China.

I have already discussed other non-Brexit causes of lower agricultural exports:

¹⁴ In 2021 the UK's largest berry export market was Hong Kong, importing over 22% of UK Berry exports and just piping Germany.

¹⁵ The record berry exports in 2020 are interesting as at the time, UK farmers were complaining they had no EU workers to pick their crops. So, who picked the record strawberry exports?

¹⁶ China was still the UK's largest pork market in 2021 buying £147 million and although lower than the £200 million they bought in 2020, China's 2021 UK pork imports were still £100 million more than in 2018.

- bad weather lowers yields and reduces the produce available for export as UK domestic demand is generally more profitable, UK customers will pay more for UK produce and obviously transport costs are lower, and so domestic orders are filled first;
- low crop prices will deter farmers from sowing crops in the first place as will high fertilizer and diesel prices – as we shall probably see when the 2022 statistics are released;
- crop yields can be hit by changes in farming regulations. UK Rapeseed yields fell from 1,752,000 tonnes in 2019 to 981,000 tonnes in 2021: consequently, exports were negligible in 2021 while imports went from 354,000 tonnes in 2019 to 921,000. This is generally blamed on the UK's ban on the use of neonicotinoid coated seed causing an aphid outbreak, which apparently lowered yields. Other causes are also possible.
- high prices also lower demand for UK exports. Higher prices of meat caused by high animal feed costs in 2022 will have lowered demand, especially from less affluent markets, including the less affluent EU markets.

We cannot ignore price changes when analysing export quantity changes. Yet economic commentators and the NFU alike, find it easier to blame Brexit for lower export quantities than the price elasticity of their products.

For example, although UK lamb **export quantities** in 2021 were 20% lower than in 2020, the **value of those exports** at £439 million, was almost unchanged from 2020, which was the highest export value since 2002. The average unit export price in 2021 for UK lamb was £6,260 per tonne, 26% higher than 2020 (£4987) and 50% higher than 2019 (£4200). These higher prices will hit UK lamb export volumes to all destinations whether in the EU or not.

There are also some long-term issues in this market: although France is still the UK's largest export market for lamb by a large margin, the amount of lamb exported to France has been falling steadily since 2009. The industry may be surviving on the UK's domestic market, but they should be looking for replacement export markets, the most obvious one would be the US as they have a relatively small domestic per capita sheep flock.

Were any food exports hurt by Brexit?

Some food exports to the EU fell after the UK left the EU's Customs Union and have been slow to recover, principally the preserved meats and processed vegetable subsectors. These are small export sectors for the UK, with global UK exports of both subsectors combined worth about £500 million before Brexit. Small and medium sized (SME) food manufacturers may have also been affected by the added friction of exporting to EU countries, although the government set up grants for export training programs in 2018 to help SMEs meet any new requirements and deal with any paperwork.

However, almost all of the UK's large food exports by value are manufactured foods such as biscuits, chocolates, confectionary, mustard, soft drinks and spirits. These industries are dominated by large multinationals such as Cadbury's, Pladis, Nestle Rowntree, Unilever and Mondelez, with export departments that are used to dealing with customs declarations. After all, these companies export all over the world and have been doing so for decades. So, the actual impact of border friction or a fall in trade relationships in the food sector is likely to be small.

The image of the small Welsh hill farmer exporting to Europe plays well for the National Farmers Union (NFU) trying to garner political support but is far from the reality of the majority of the value of UK food exports. Food, beverages, agricultural and horticultural products typically deliver just 7% of UK

goods exports. This 7% total is made up of beverages, about 2%; manufactured food stuffs, 2%; agriculture, 2%; and horticulture and non-edible animal products, 1%.¹⁷

The chart below also clearly shows the relative importance of various products to UK trade. Despite the media attention given to the NFU, the UK exports almost the same value of mustard and condiments as it exports the beef, pork or lamb to eat with them. The most valuable food exports for the UK are – by far – biscuits, chocolates, sweets, ice cream and other manufactured foods as well as food preparations, extracts, essences and concentrates and malt extracts.

What happened to fish?

Using ONS SIC data, UK exports of fish and aquaculture decreased by £250 million between 2019 and 2020 and then rebounded in 2021 so that exports to EU destinations who bought over 60% of UK exports in 2019, were virtually unchanged while exports to non-EU countries remained low with the fall in exports to non-EU markets such as China and the US both falling by a third. However, this group includes farmed fish which were not as effected by high fuel costs in 2022 as ocean going fishing boats that use fuel for refrigeration as well as for propulsion.

The fall in EU exports cannot be blamed on Brexit trade friction as exports to France – the UK's largest market – increased in 2021. This could be due to some of the new UK fishing licences requiring fish caught in UK waters to be landed in the UK, even if they are caught by French fishing vessels and are destined for EU markets. It is also likely that France has become a distribution hub for other EU markets, as exports to most other EU countries fell with the exception of France, Poland, Portugal, Latvia and Lithuania.

¹⁷ ITC COMTrade data

THE FUTURE FOR UK TRADE

We have now established that the UK economy was not hurt by Brexit even if trade figures were lower to EU, much of the manufacturing in these sectors moved out of the UK many years ago. But that doesn't mean that UK trade does not need further scrutiny.

Successful exporting nations must be producing what their customers want to buy. Not what they would prefer them to want. If the UK only produces the sort of goods the government is enforcing on its own population, we shouldn't be surprised if potential customers turn to other suppliers to provide their import goods. This is most obvious in the different attitudes to carbon dioxide emissions between the EU and the world outside the EU.

And many of the UK's customers will be outside the EU in the future. Air India, for example, has just agreed to buy 250 new planes of which 40 will be Airbus planes using Rolls Royce Trent XWB engines. These [engines use 'a significant number' of parts made by Tata Advanced Systems Limited in India](#) and even some engineering work is now done in India by Tata Consultancy Services. So, the UK should not be complacent about its export industries, they may not remain in the UK forever.

To avoid UK based companies moving both their production and their engineering work to countries with a more encouraging business environment, the government must create a business-friendly environment in the UK. Manufacturing in many industries has already moved to countries with cheaper production, making the UK economy more and more reliant on jobs in research and development; design; marketing and sales; and legal and business services. All employ a lot of people in the UK, but they are also jobs that can be done outside the UK. Keeping them here should be of paramount importance to the UK's economy.

Unfortunately, the present government is doing the exact opposite. This could be dangerous. Now that many of the UK's largest export industries are dominated by multinational companies such as Nissan, Toyota, Tata and BMW, moving their headquarters outside the UK will be an easy decision if it makes financial sense to do so. Why would they stay or increase their investment in the UK, if the government continues to increase their taxes, reduce their deductions, retrospectively charge windfall taxes if they make too much money, and add surcharge taxes if they don't, and all while retaining the same regulatory hurdles imposed by the EU? AstraZeneca may just be the beginning of this exodus.

Fuel runs everything. Brent crude is ideal for producing diesel, which is essential for road transport, farm machinery, mining equipment, other heavy machinery and even some trains. Russian sanctions could last long after the Ukraine war is finished especially if Putin remains in power. If Russian oil isn't available, North Sea Brent will be in much greater demand. The UK needs to rethink its attitude to hydrocarbon fuels and North Sea extraction.

Key points for trade policy from industry analysis

The change in UK exports between 2019 and 2021, was *very* unevenly spread across sectors. Lower exports of vehicles, clothing and footwear, oil and gas, food products, and other manufactured goods accounted for 85% of the fall in UK-to-EU exports.

This disparity alone shows how conducting analyses on aggregate trade data can deliver highly misleading results. Analysis by industry sector is not only essential for deciding trade policy it is vital for decisions about business and energy regulations, taxation and education and immigration.

As well, any sensible analysis needs to use a longer timeframe to avoid misattribution of causation for reductions in exports. We have already seen sharp rebounds of UK exports in 2022 in many sectors that were claimed to have been destroyed by the loss of exports to the EU. Even accounting for inflation, we have seen that the EU is happy to import increased quantities of UK: oil and gas; pharmaceuticals; machinery; non-ferrous metals; paper products: furniture; beverages; dairy products; and meat.

As of early 2023, the sectors that are still dragging down UK exports are mostly those which were subject to negative long-term trends in EU markets: motor vehicles; pharmaceuticals; and electronics.

Although Aerospace export values had still not regained their 2019 highs by the end of 2022, the recently announced sales of Rolls Royce engines to Air India should make future trade figures look much healthier. Despite the rhetoric, this is still a highly successful industry for the UK, and its export troubles are wholly unconnected to Brexit. However, as aerospace is the UK's second most valuable goods-export industry, it exerts a massive influence on the overall trade data.

Meanwhile, goods in other sectors such as clothing and footwear – which experienced strong export growth to EU markets in the years preceding Brexit – will, for the most part, no longer be recorded as UK exports because they cannot meet the TCA Rules of Origin requirements, as little, or not enough, of the value of their manufacture happens in the UK. But the abrupt step down in the export and import data, as apparel and footwear were removed from UK-EU exports as well as EU-UK imports, does not indicate any change for UK manufacturing.

However, some UK sectors were destined to see their exports fall whether or not the UK stayed in the EU Customs Union. This is because trade data stretching back two decades shows that some UK manufacturing sectors were already stagnating or in long-term decline, in terms of exports. Either because the industries as a whole or UK company manufacturing have moved to Southern and Eastern Asian countries or because UK companies moved their manufacturing to South and Eastern Asia and in some cases to Eastern EU countries. This is particularly seen in UK exports of vehicles and pharmaceuticals to other EU countries.

The 2021 data was not unexpected by industry analysts who track UK sectoral trade. And it is suspicious that media and economic commentators who lament the state of UK trade failed to notice the slow demise of many UK export industries that started long before the Brexit referendum. Nor did they comment on the £105 billion trade deficit (2019 prices) in UK–EU trade in manufacturing on the eve of the UK departure from the EU.¹⁸

¹⁸ ONS Source: Office for National Statistics BoP CP Series, Q4 2019 publication. Released February 2020. Adjusted to 2019 prices.

UK TRADE RESEARCH IS VITAL FOR GOOD POLICY MAKING

The economists, institutes and journalists who have readily attributed falls in UK exports to Brexit have not sufficiently examined:

- UK trade data at the sectoral level;
- long-term trends in UK manufacturing;
- reductions in business investment that predate the Brexit referendum;
- the relocation of production outside the UK to countries with a lower cost base;
- the relocation of pharmaceutical production to countries with lower taxes;
- the Rules of Origin in the TCA that removed products manufactured outside the UK from the trade data;
- shortages of key components in the car industry;
- stockpiling during 2019 in case of a 'No Deal' Brexit;
- stockpiling in the 4th quarter of 2020 to avoid possible border congestion following Brexit;
- record low North Sea oil production and investment;
- the UK's export mix compared with other developed nations to see if UK exports would be hurt relatively more by lockdowns, Chinese factory closures and international travel restrictions .

As a result, commentators rushed to judgement on Brexit rather than examining the available trade evidence. The UK media should also take some of the blame as it preferred to highlight the anecdotal experience of small artisan exporters to the EU rather than explain that UK trade is dominated by multination companies competing in global industries. All were very familiar with export processes and would no have found Brexit to be a problem.

There was an idealisation by the media of UK trade with the EU even though UK goods exports to the EU had not grown since the turn of the millennium while UK goods exports to non-EU countries had grown enormously. The media overlooked the fact that the only UK goods trade growing with the EU were imports and with them, the UK's trade deficit.

Politicians should be aware of the dominance of vehicle, aircraft parts and oil and gas exports for the UK trade and why the UK was disproportionately affected by covid related key component shortages and travel restrictions. They should also be aware of why the continued lockdowns in China in 2022 made it likely that UK trade would recover more slowly than other developed economies who specialise in other industries.

Misleading economic comparisons

It is becoming common for media commentators to compare the UK's economic statistics with those of other G7 nations without considering how different their major export industries have become over the past 50 years. This is especially true of the 4 European countries in the G7. The G7 GDP per capita, PPP, measured in constant prices since 2001 is shown in the graph below. It is hard to distinguish the UK from France, their GDP' per capita are so similar. The standout growth since 2001 is from the US – not an EU country. When the 2022 G7 GDP data is released, this will be even more obvious.

The 2022 dividing line will be between oil and gas exporters: the US and Canada; and oil and gas importers: Japan, Italy, Germany and France. The UK should be in the first group, but due to a series of poorly thought through regulatory and tax changes, the UK has discouraged investment in oil and gas production that, as discussed earlier, has been falling for over 10 years. This meant that when Russian gas was no longer available to power Germany industry, it was the US that came to the rescue with additional gas rather than the UK. The UK merely acted as a land bridge for this trade.

Misplaced assumptions about benefits from EU membership

There are also widely held but mistaken beliefs:

- that the value of a good is only in its physicality not in the services attached to it or in the process of creating it or organization involved in its production;
- that trade only happens with countries that are geographically close to each other; and
- Because membership of the EU removed barriers to trade, then EU membership must have increased UK trade.

In fairness that last one is true but only in total trade due to the amount of goods the UK imports from the EU, not the amount of goods it exports to it, and only in terms of trade with the EU not for trade in general. If anything, EU membership limited, or at least slowed, growth in trade with the rest of the world by imposing tariffs and non-tariff barriers to non-EU imports. Which were often reciprocated, thus lowering UK exports.

UK goods exports to the EU barely grew in the 20 years leading up to Brexit. The only advantage of being in the EU was that some UK products were not hit with the EU's eye watering tariffs. But as trade is determined by need and taste, more than distance. Many UK goods were not imported by the continental EU countries simply because they had a more competitive supply or because local tastes were quite different. This is most obviously seen in food exports.

The UK's biggest food market in the EU is Ireland even though the Irish population is less than 5 million people. Even then food exports to Ireland will have been exaggerated by the UK land bridge effect. That is a proportion of goods will have come from the continent, then divided in the UK with a smaller volume transported on to Ireland. Outside of Ireland, the other EU countries that import UK food are generally ones with large UK expat communities or are popular holiday destination such as Spain. Despite the UK media attention on British sausages, the UK exported more sausages in 2019 to Qatar and Nigeria than it did to Italy, (*ITC data, measured by weight*). By the way the big drop in UK sausage

exports in 2021 came from Qatar and Norway, not Ireland which bought 2,831 tonnes of UK sausages in 2021, almost 300 tons more than they bought in 2019.

I don't want to give the impression that I consider exports to be better than imports, a country benefits most if it can import goods produced more efficiently in other countries. But this benefit is diminished if it can only buy from a select group of countries which may not be efficient producers relative to the rest of the world.

According to Eurostat: Between 2011 and 2021, the highest average annual growth rate was recorded for [EU] imports from China (6.3 %) and Türkiye (6.2 %). The largest decreases were seen for imports from the United Kingdom (-2.5 %) and Russia (-1.9 %).

The decrease for UK imports started well before the Brexit referendum. Between 2021 and 2016 EU imports from the UK fell, ([Eurostat data measured in Euros](#)) but imports from the US and China increased strongly. And although this period coincided with a very strong Pound relative to the Euro which might have explained the discrepancy, EU imports from Switzerland also increased during this period even though its currency was also strong relative to the Euro. It is hard not to conclude that the EU just didn't need or want what the UK was selling even though the UK was a full member of the EU at the time, unlike the US, China or Switzerland although Switzerland does have a lot of trade agreements with the EU.

If the Customs Union and Single Market were central to UK trade performance in the EU, how exactly did non-EU countries exceed the UK's export performance into the EU? It was not the result of inherently uncompetitive manufacturing as UK goods exports to non-EU markets were growing over the same period.

The reality of trade is that people buy what they need or want at the most competitive price available, regardless of whether it is produced within a customs union or outside it or in a country on the other side of the globe. The UK did not produce things that other EU countries needed, either because EU countries had a competing domestic supply or there were other more competitive suppliers within the EU. Forming a Customs Union amongst similarly industrial countries was inherently risky, and likely to end with the most competitive EU producers taking most of the EU market.

When the UK joined the EEC, nearly all of the other eight EEC countries produced goods from the same sectors as the UK. The UK's comparative advantage lay in its sources of raw materials from Commonwealth trading partners and the UK's own abundant supply of energy: coal, and subsequently oil and gas. But joining the EEC made importing raw materials from the Commonwealth more difficult and often also more expensive. To compound its troubles, the UK's recent anti-hydrocarbon based energy stance then made UK industrial energy comparatively more expensive than on the continent, thereby removing the UK's main industrial advantage. Meanwhile, long-distance pipelines moved cheap gas from Russia to Central and Eastern EU countries. This combination gave Germany and other Eastern European a growing comparative advantage over UK manufacturing.

This offers one explanation of why UK exports to the EU ultimately stagnated, and why UK industry failed to benefit from the Customs Union to any extent observable in the trade data of the last 20 years. It is important to understand that the UK's goods exports to the EU had already stagnated before they left the EU.

Trade intensity does not measure economic performance.

Analysis of UK trade has been misled by the conflation of 'trade intensity' with economic performance. Trade intensity simply measures total trade, i.e. exports plus imports, as a proportion of GDP. It does

not measure anything other than the relative size of a country's trade compared to its economy. If a country's GDP fell but its trade remained the same, then its trade intensity would increase – but no economist believes that a falling GDP is a good thing.

For countries with small populations who lack an internal market sufficient to allow large-scale production, trade is vitally important. It's the only way that they can benefit from economies of scale. Sweden and New Zealand are examples of countries with small internal markets that have produced globally recognised brands that dominate international markets. Countries with a large domestic market like the US are less reliant on trade. The UK has a relatively large internal market and many of its producers only supply the domestic market.

For example, when Liam Fox became head of the Department of International Trade (DIT) in 2016 he was widely ridiculed in the press for a speech at the Conservative Party Conference denouncing UK manufacturers for not exporting. According to Fox *"it is a sad fact that only 11% of British companies export anything beyond our borders"*. Yet UK companies continued to survive. Why? Because they have sufficient customers within the UK to remain profitable. They do not need to export. Belittling the UK for having a low trade intensity shows that the economists at the OBR, like Liam Fox, have never looked at the US's or Japan's trade intensity – both are well below that of the UK's. Nor does the OBR seem to understand why trade is more important to countries with small populations.

Then there's a UK-specific reason why trade intensity is a poor metric of performance: it gives equal weight to imports and exports. In the 20 years prior to Brexit, both exports to and imports from *non-EU* countries grew faster than UK GDP. So, the UK's *non-EU* trade intensity increased. But for trade with the EU it was the opposite. Goods exports to EU countries barely grew at all or in some instances declined. Meanwhile goods imports from the EU grew faster than the UK's GDP growth rate, until their value approached double UK exports in 2019. So, while pre-Brexit 'import trade intensity' grew, 'export trade intensity' fell. Making trade intensity of negligible use for analytical or policy purposes.

Additionally, trade intensity makes no distinction between exports that generate any economic value in the UK, and distribution trade that is simply passing through – and measured twice in trade intensity calculations so greatly skew the statistic. This has always been the case for goods travelling from continental EU to Ireland via the UK's roads. But in 2022 the UK became a land bridge for US Liquid Natural Gas landed in the UK but destined for the EU, this trade will greatly inflate the UK's trade intensity for 2022. This trade may be profitable for infrastructure owners, but it won't produce much value-add for the UK economy.

Trade Volumes

Using trade volumes as a metric for trade is helpful because they eliminate price fluctuations. It is most useful when measuring homogeneous commodity exports such as oil and gas or crops. Although it is not as useful as trade outsiders believe as most commodities aren't that homogeneous and there are many standards of oil, wheat, beef etc hiding under volume measurements.

This is even more true if using '*volumes*' to measure trade in manufactured goods. While the prices of specific manufactured goods may not change, the inherent value of units within the same manufacturing sub-sector can vary dramatically. Additionally, some UK industry sectors have very lumpy high-value, low-volume trade and some have spasmodic volumes. The lumpiness of many UK exports is clearly displayed in export data for the UK's exports of aircraft engines, wings, satellites or spacecraft, or mine excavating equipment or even art and antiques. It would be ridiculous to measure these sectors by volume.

For example, the UK's premier auto industry body, the Society of Motor Manufacturers and Traders (SMMT) uses 'vehicle units' as its chief reporting that consistently shows the EU taking more than half of UK exports – 55% in its [October 2021 update](#). And yet the trade data shows quite clearly that when measured *by value*, exports of motor vehicles and parts to non- EU markets overtook exports to the EU in 2012. Non-EU vehicle exports are now consistently worth 25–30% more than exports to the EU, although the SMMT continues to report that most UK car exports go to the EU.

The UK exports premium vehicles to non-EU countries, while its EU trade is skewed towards mass market models. This isn't surprising, multinational mass market car producers have multiple production facilities from which to supply non-EU customers, but the UK's premium vehicles are only produced in the UK.

The value differential between a premium vehicle and a mass market vehicle means that any unit volume export measurement is very misleading. Rolls-Royce recently reported that the average price of its Goodwood-made vehicles is around £450,000, while a Sunderland-made Qashqai retails for about £26,000. To use volume in this industry, analysts should use an equivalent unit measurement, so [the 6,178 Aston Martins sold in 2021](#) would be counted as 42,300 Qashqai equivalent units.

By measuring unit volumes without also measuring unit value analysts are unlikely to understand where the UK is developing profitable export overseas markets. Anyone examining the SMMT website would think UK vehicle exports are EU-centric and doomed, because it's based on volumetric reporting. Anyone examining the company reports and press releases of Aston-Martin Lagonda, Jaguar-Land Rover, Rolls Royce and Bentley would see that the UK's luxury auto sector is thriving – so long as the companies can source their components – and that they are focusing on the growing markets outside the EU.

Trade Relationships

There is a belief that UK exports are dependent on the number of trade relationships that a company has and that trade relationships have been reduced by Brexit and therefore resulted in lower trade. Although this may sound reasonable, it isn't.

For the most part, UK exports are dominated by a small number of very large companies in the UK's main export sectors. Such as BP and Shell in the oil and gas sector; Toyota, Nissan, BMW and JLR in vehicles; Rolls Royce in aircraft; AstraZeneca and GlaxoSmithKline in Pharmaceuticals; and Cadbury, Pladis, Nestle Rowntree, Unilever and Mondelez in food products. All of these companies have export departments and have been exporting their products all over the world for many years.

There are definitely smaller companies involved in trade but their impact on the UK trade statistics is minimal. However most small companies find it beneficial to have a few strong trading relationships rather than a greater number of weak ones. It is not about how many trade relationships companies have, but how much they like the product.

However, the trade data clearly shows that the Netherlands and Belgium have become distribution hubs for many UK exports. UK SME producers using single import agents to manage their EU-wide distribution, will have reduced their number of trade relationships, without necessarily reducing the value of their exports.

It's the economy, stupid.

More important than trade intensity, trade volumes and trade relationships, is the economic circumstances of your trading partners and the relative values of the exporting and importing nation's currencies.

It seems strange that economists working at the *Financial Times* or at the OBR have not considered that lower UK exports to the EU may simply reflect Europe's lower discretionary spending power and have nothing to do with Brexit. It is probably that UK goods exports to the EU will not grow much beyond their 2019 values in real terms until EU economies start to grow again. UK, US and Qatari oil and gas companies are absorbing a lot of money that in a normal market could be spent on other things. In short, it is not always about us.

In the long run, price is the determining factor in trade, both absolutely and relative to the currency of the trading partners, unless a company is specifically catering to ultra-high net worth individuals whose purchasing decisions are not influenced by price. Yet economic commentators find it easier to blame Brexit for lower export quantities than to examine the price elasticity of the UK's export products.

In 2015 the pound hit a high of 1.42 to the Euro, making UK manufacturing even less competitive compared to manufacturing in the Eurozone. Couple this with the tax advantages of Ireland, Hungary, Estonia or Luxembourg as well as EU regional development grants, and moving manufacturing out of the UK would have been an easy decision for many companies. This was demonstrably true in the UK's auto and pharmaceuticals industry, for example. But incredibly the same commentators that complain about lower UK exports, also complain about the fall in the value of the pound since the vote to leave the EU. If anything, a lower pound should increase UK competitiveness.

A strong currency and high labour costs have resulted in declining UK manufacturing and exports in multiple sectors, including cars, pharmaceuticals, chemicals, computers and electronics, and apparel and footwear. This decline in manufacturing predates Brexit. The failure to mention these trends in post-Brexit analysis is baffling.

The flatlining of UK goods exports to the EU in the decade before the UK left the Customs Union is the greatest un-talked about aspect to UK-EU trade. The average annual value of UK manufacturing exports to the EU was lower in the decade 2010-2019 than in the decade 2000 to 2009 (real prices, excluding precious metals). The same is true for UK goods exports, which include energy and agriculture.

No analysis of the UK's current economic performance is credible if it fails to address these straightforward observable trends. And their origins are can only be uncovered in a sector-by-sector analysis of UK manufacturing and trade.

POOR ANALYSIS HIDES SERIOUS SECTORAL CHALLENGES

The UK needs far more rigorous trade analysis. And it needs this quickly for three reasons.

1. By mistakenly attributing falls in exports to Brexit, UK Governments will fail to address serious negative trends in UK trade.

The UK's premium vehicle industry is a huge net exporter in non-EU markets, and it helped deliver a net £13.5 billion boost to the UK trade balance in 2019. But this success is under direct threat because manufacturing continues to shift offshore, partly aided by the UK-EU Trade and Cooperation Agreement (TCA) that will require vehicles to have less than 45% of non-originating material by the end of 2026.

The provision of microchips has become a major issue for the UK's vehicle industry. This is the principal factor cited by the industry as the cause of continued sluggish production. The £10.1 billion decrease in vehicle exports between 2019 and 2021 exceeds the falls registered in any other sector. And the 2022 data confirms that the auto sector is still exerting the biggest sectoral drag on the UK's export recovery. Fixating on Brexit won't solve what is statistically the biggest challenge to UK exports. Securing the auto industry's supply chain should be a vital national endeavour.

2. By failing to analyse historical sectoral data, UK Governments will also fail to appreciate the relationship between taxation, investment, manufacturing and exports.

The news this week that AstraZeneca has decided not to build a new £320 million production facility in Macclesfield Cheshire as planned but rather to build the plant in Ireland, is further evidence that the UK's planned increase in corporation tax from 19% to 25%, (more than double Ireland's rate) is a spectacular own goal.

UK pharmaceutical exports should have increased during the Covid pandemic, but the UK had ceased to be a major vaccine manufacturer over the preceding decade. Despite being headquartered in the UK, GSK, has three major vaccine production sites in Belgium. Pharmaceutical disinvestment from the UK began in 2009–10 but is barely acknowledged by government or economic commentators and there are clearly no plans to reverse this trend.

Although pharmaceutical trade data for 2022 has recovered from its 2020/1 lows, UK pharmaceutical exports are still below their 2009 peak. If the structural uncompetitiveness of UK pharma manufacturing isn't researched, acknowledged and addressed – including the difference between UK and Irish corporate taxes – then one of the UK's larger export industries will continue to decline.

There is no trade without products, there are no products without companies, there are no companies without investment, there is no investment without a conducive business environment. It is the job of government to create that environment with consistent low corporate taxes and deductions as well as simplified regulation.

3. Diligent trade research is required to determine whether there are any the long-term benefits of tariff-free trade with the EU across all UK sectors.

Currently, the biggest source of leverage that the EU exerts over the UK is maintenance of the post-Brexit trade deal, the Trade and Cooperation Agreement (TCA). This agreement did prevent a sudden dislocation in UK–EU trade in 2020–21. But in the long term, the TCA represents a poor deal for the UK. In effect, the TCA hard-wires the worst-performing elements of UK–EU trade into UK's post-Brexit trading relations. Those factors that led to the

£105 billion deficit in manufactured goods in 2019 – in cars, chemicals, food and pharmaceuticals – were essentially conserved in the new trade agreement without any attempt to understand what lay behind them.

Meanwhile, the best performing element in UK–EU trade – the UK’s financial services industry – was specifically extruded from the TCA.

No country given a free hand would ever negotiate such a one-sided trade deal. As it is, the TCA primes UK trade for an accelerated lurch into even greater deficits. And yet the TCA is being used by the EU to pressure the UK into keeping the Northern Ireland Protocol, and there continues to be talk of the EU forcing the UK to align with EU trading regulations in order to ‘solve’ the problems with the Protocol.

Such an alignment would be disastrous for the UK and prevent it from benefiting from trade outside the bloc. But politicians could fall for this trap because of a widespread mistaken belief that the total fall in UK trade during 2020 and 2021 was solely to do with Brexit even though these figures obviously included trade with non-EU countries. This negative consensus has been repeated and repeated in the media, with no thought as to whether the fall in exports might have any other causes, such as the international travel bans, or key component shortages for motor vehicles.

Promoting this negative consensus was easier to do than an outside observer might imagine, as the BBC and other media groups have emphasised trade with the EU to such an extent that many people believe that the UK only traded with the EU. The BBC also constantly emphasises exports to the EU while the reality of UK trade with the EU, is imports.

This naive or duplicitous mistake, that Brexit is the only cause of lower UK exports, has been amplified in the press for almost a year now. Politicians without strong industry trade analysis will be easily conned by the certainty spouted by media commentators who clearly don’t understand UK trade.

CONCLUSION – POLICY MAKERS SHOULD FOCUS ON WHAT MATTERS

Brexit is an opportunity for UK policy makers to look again at what drives export performance and explore remedies for poor trade outcomes – including where non-tariff and non-regulatory factors were at play.

UK policy makers should be forward looking and identify those sectors in UK manufacturing that have demonstrated a comparative advantage in global markets. Then create a financial and regulatory environment in the UK that makes successful export industries globally pre-eminent – including the impact of corporate taxation.

The UK has a lot of advantages when it comes to trade but often these are overlooked or taken for granted. The UK's large financial markets grew from offering trade finance and although this function is now overshadowed by the fund management and corporate finance industries, trade finance is still very much a part of the UK's financial service industry: offering letters of credit; export finance; hedging currency risk; insuring cargos and against non-payment; bills of lading; etc. London is still home to world foreign currency trading, just under half of all transactions happen in the UK.

But the UK still needs to create a safe environment for companies to invest and grow their business. Erratic and constantly changing corporate tax rates and reduced deductions, the imposition of windfall taxes on successful businesses or worse back dating taxes, do not encourage entrepreneurs or established companies to build their businesses in the UK.

That said, some UK companies have created internationally competitive products and it is important that the government encourage them to remain in the UK. If their manufacturing and their customer base are in Asia, this will become more and more difficult to do.

Some UK export industries worth attention are:

- **Motor vehicles.** The UK auto sector achieved a CAGR of 6.3 per cent in exports to non-EU markets from 2000–2019. This reflects the success of premium British marques as well as growing incomes in these non-EU markets.

The increases in offshore wind power could provide sufficient green energy to make UK electric vehicles and batteries which would be a comparative advantage that allows UK to offset the pull of subsidies from the EU, and possible the US as well. But if the UK's major growth is in India and China then it will be important to produce the type of vehicles that suit those markets. Many fast-developing markets have poor electricity production and brownouts are common. While electric vehicles may suit a relatively small country like the UK with many charging points and reliable electricity production, the UK's new customers may prefer to stick with internal combustion engines.

- **Aerospace.** This is UK's second-largest export sector, and it achieved a CAGR of 3.4 per cent from 2000–2019. It already has a high global market share. But the industry is changing fast. Like cars, the new customers are in the developing world. As was reiterated last week with the announcement that Air India had agreed to buy 250 planes including 40 Airbus A350's which will be powered by Rolls Royce Trent XWB engines. While the wings will be made in Filton, Gloucestershire and Broughton in Wales.

According to the Rolls Royce press release India is a strategic market for their business as they expect air passenger traffic in India to grow by 6% a year and that the industry will require more than 400 medium and large aircraft. It is interesting that a significant number of parts

from the Trent XWB engines are already being manufactured in India, as are some engineering services. Keeping this industry in the UK should be in the forefront of UK government policy.

Drones are replacing manned vehicles in civil and military aerospace, so agility is vital if the UK's globally successful aerospace industry is to thrive. The sheer diversity of aerospace engineering skills means the UK could become a global epicentre for the development of unmanned air vehicles UAVs. This is also a source of proven comparative advantage that UK policy should cultivate.

- **Pharmaceuticals.** This sector achieved a CAGR of 9.8 per cent in the decade 2000–2009, before investment haemorrhaged to Ireland, Belgium and the Netherlands. If the UK can fix its un-competitiveness in corporate taxation, it could become the world leader in manufacturing cell and gene therapies. Keeping research and development in the UK is also important and hopefully the new clinical trial regulation will help.
- **Energy.** The UK should have been in a position to supply the EU with natural gas in 2022 rather than merely acting as a land bridge for natural gas imported from Qatar and the US. Far worse is the inability to supply domestic needs from the North Sea during 2022. This injected a £40.9 billion deficit into UK global trade.¹⁹ This is the equivalent of 22% of the UK's *entire* goods exports to the EU last year (minus precious metals).

North Sea Brent crude is ideal for producing diesel which will be required for ships, trucks, vans, farm equipment and industrial vehicles for many years to come. The government should be encouraging North Sea oil and gas production, not taxing it out of existence.

- **Microchips.** The shortage of key components – such as computer chips – after the Covid lockdowns has sparked the US to encourage the re-shoring of this industry with generous subsidies. In August the US government signed the Creating Helpful Incentives to Produce Semiconductors and Science (CHIPSS) Act which will give computer chip manufacturers subsidies worth \$52.7 billion over five years to increase their US chip manufacturing.

As we have seen, UK manufacturing industries are also vulnerable to computer chip shortages. If the UK wants to protect its vehicle manufacturing, aerospace and defence manufacturing, machinery manufacturing, precision equipment manufacturing and even its wind and solar energy technology, it should be considering similar ways to encourage the on-shoring of chip manufacturing.

The damage currently inflicted on the car industry alone is – in trade terms – perturbing. [Jaguar-Land Rover's backlog in orders alone reached 215,000 vehicles in early 2023](#). This is a tragedy for UK exports. For decades, UK luxury car manufacturing has struggled to be globally competitive. Now that multiple brands are genuinely competitive, it is ridiculous that sales are held up, simply because UK car makers cannot source key components.

- **Customers.** To tap into the growing customer base in south and eastern Asia, the UK has to produce what they want to buy not necessarily what we want to use ourselves nor what we believe is politically correct. Both India and China have pledged to **increase** their CO2 emissions until 2060 and 2050 respectively. Converting the UK's entire car production to electric vehicles may not be the smartest move for UK exports to countries with plentiful petrol and diesel, but less reliable electricity.

¹⁹ In the five years to 2019, the UK's annual net deficit in natural gas averaged £4.6 billion to £8.9 billion.

Policy success will mean tackling competitive threats to these sectors, including vehicle manufacturing subsidies in the EU and potentially the US, BAE Systems' stranglehold over UAV development²⁰, and high comparative rates of corporate taxation for the pharmaceuticals industry. It will mean taking whatever actions are necessary for the UK to be the most globally efficient and profitable location for corporate headquarters and manufacturing in these sectors. This is how other countries develop successful trade policy.

In terms of security of supply, policy success means reconsidering what's important to UK manufacturing and trade. It is perverse that the UK's government has almost taxed out of existence its own oil and gas industry; and to have done so before green energy can supplant it in terms of domestic energy security or export revenues. It also sabotages UK industry at source, since cheap power is a vital source of comparative advantage in manufacturing. Microchips are a similar story. The UK should have adequate supplies from a relatively close ally once the US has re-shored its own production using vast subsidies. But the US will have their own industries to supply. Given the UK's export mix, we can't afford to be at the end of the queue for computer chips in critical export industries, such as cars.

The prize is potentially enormous. The current size of UK's aerospace, pharma, oil and gas, machinery, precision equipment and premium vehicles sectors is such that if UK policy is effective, then in five years' time, resulting global export growth will render the provable impacts of Brexit on UK trade trivial in comparison. Each has recently demonstrated the ability to sustain high rates of annual growth in global markets: 6.3% p.a. for autos; 9.5% for pharmaceuticals (2000 to 2009); and 3.6% for aerospace.²¹ That's the sort of success that UK policy should cultivate.

But the real problem for UK trade isn't Brexit: it's the absence of high quality, sectoral research into UK trade. Without that, no Government can develop effective trade policy. The 2022 trade data shows that most sectors have recovered the EU exports lost during 2020 and 2021. Where they still lag it's because of factors that are unconnected to Brexit trade friction but merely a change in how trade is recorded.

The reasons behind the deep, pervading ignorance that characterises debate on trade in the UK deserve study in themselves. It's not as if the UK is short of economists. But until Britain's research deficit is remedied, its trade policy will be determined by lobbyists and media commentators with their own political axes to grind.

²⁰ National defence procurement agencies should note that the most effective UAVs employed in the Ukraine war appear to be those developed outside of the major defence primes. Turkey's Baykar is an example.

²¹ 2000 to 2019 except for pharmaceuticals. Office for National Statistics: BoP CP Series, Q4 2019 publication. Released February 2020. Deflators: March 2020 (2018 base prices).

Annex A

Some examples of UK institutions, economists and media commentators blaming Brexit for the fall in UK trade.

- The Office of Budget Responsibility (OBR) claimed in March 2022 that its original, modelled forecast for ‘a 15% reduction of trade intensity as a result of Brexit’ remained viable, and it predicted that this will drive a 4% reduction in productivity.²² This analysis used 2021 data.
- In June 2022, the Centre for European Reform (CER) used a doppelgänger model which cherry picked the best attributes of several countries and compared them to the UK in total, while ignoring any of the less positive attributes of the cherry-picked countries. The CER analysis has been comprehensively rebutted by Professor Graham Gudgin of the Judge Business School at Cambridge University.²³
- In October 2022, the UK’s *Financial Times* released a 28-minute film on the impact on the economic cost of Brexit²⁴. It included the ‘trade intensity’ metric (sourced from the OBR) that showed UK trade intensity lagging other G7 economies when indexed to 2019 and claimed that this showed how UK exports had failed to recover from mid-2020 as fast as other advanced economies. This analysis falls apart when we look at the individual G7 countries’ actual trade intensity. The UK is firmly in the middle of the range. And in any case, the UK’s trade intensity with the EU is inherently skewed towards imports. After two decades of goods imports from the EU growing approximately 2.5 percentage points faster per year than good exports to the EU²⁵, the UK now imports goods worth approximately 58% more from the EU than we export.²⁶
- The OBR also choose to graph ‘**goods export volumes**’ even though the majority of UK exports are either high value low volume goods or services. The UK does not specialise in high volume consumer goods or many raw commodity exports, both of which reflect well in measured volume. Since 2015 the value of UK service exports has been between 80% and 90% of UK goods exports.
- late October the BBC followed this up with a similar five-minute feature on the economic consequences of Brexit.²⁷ This too used OBR data analysis on trade intensity to show how UK trade was suffering. Again, it, used data from March even though September data would have been available at the time and used aggregate trade data rather than looking at the change in each industry sector. Had they done so, the limited effect of Brexit would have been obvious.
- In evidence to the UK Treasury Select Committee on May 16 2022, Andrew Bailey, Governor of the Bank of England commented that: ‘*We have not seen anything to change our view... that there would be a negative effect on trade [from Brexit] and that it would take a long time for the economy to adjust.*’²⁸

²² Office for Budget Responsibility. The latest evidence for the Impact of Brexit on UK trade. March 2022. [Link](#)

²³ Policy Exchange, Why the Centre for European Reform is wrong about Brexit. Graham Gudgin, June 2022. [Link](#)

²⁴ The *Financial Times*: ‘The Brexit Effect: how leaving the EU hit the UK.’ October 2022. [Link](#)

²⁵ ONS: National Accounts, Balance of Payments, Publication Tables, UK Trade in Goods, CPA (08) Released June 16, 2021. Excluding precious metals.

²⁶ ONS. UK Trade in goods by Classification of Product by Activity, time series dataset, Quarterly and Annual up to and including 2021 Q4. Data for 2019, excluding precious metals. Published March 2022.

²⁷ BBC: What impact is Brexit having on the UK economy. October 2022. [Link](#)

²⁸ House of Commons Treasury Committee. Oral evidence: Bank of England Monetary Policy Reports, HC 143, May 2022. Question 474, page 28. [Link](#)

- Even as the 2022 data continued to improve, the negative consensus appeared to solidify. In its November 2022 Economic and Fiscal Outlook, the OBR doubled down with:...'the latest evidence suggests that Brexit has had a significant adverse impact on UK trade via reducing both overall trade volumes and the number of trading relationships between UK and EU firms'... Curiously, neither of the two sources cited were refereed academic papers. They are a working paper and a discussion paper. Neither paper focussed on individual UK manufacturing sectors.²⁹
- On December 1, Chris Giles, of the *Financial Times* asserted that two years after Britain left the EU, '...economists have reached a consensus: Brexit has significantly worsened the country's economic performance.'³⁰ His colleague, Martin Wolf continues to dismiss Brexit as 'stupid stuff.'³¹
- On 5th December 2022, on the on the [Today Program](#)³² while interviewing Kier Starmer, Mishal Husain, was incredulous that Starmer didn't want to re-join the single market 'after everything we know, how trade has gone down and the problems for our exporters'. She did not specify how she was measuring trade nor what problems she believed were troubling UK exporters.

²⁹ OBR, Economic and Fiscal Outlook, November 2022. Page 26.

³⁰ The *Financial Times*: Brexit and the economy: the hit has been substantially negative. December 2022. [Link](#)

³¹ The *Financial Times*: The UK Government should stop doing stupid stuff. November 2022. [Link](#).

³² [BBC Radio 4 - Best of Today, Keir Starmer on reform plans, private schools and the single market](#)