Office for National Statistics

Article

Impact of the coronavirus and EU exit on the collection and compilation of UK trade statistics

How the global coronavirus (COVID-19) pandemic and the end of the EU exit transition period impacted on the compilation of UK trade.

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1 . Main points

- The coronavirus (COVID-19) pandemic and uncertainty around the trade deal outcome of EU exit were important factors in the large movements in trade flows during 2019 and 2020.

- National and international lockdown restrictions, goods disruption at UK borders, and uncertainty around future EU and non-EU trading relationships have been prominent in comments returned by traders in our fortnightly Business Insights and Conditions Survey (BICS).

- The response to the coronavirus pandemic had an immediate impact on the compilation of trade estimates.

- The uncertainty linked to the end of the transition period for much of 2020 has given prominence to questions around business stockpiling, trade disruption and global supply chain impacts.

2 . Trade in goods practical challenges

The combined effects of COVID-19 national and international lockdown restrictions, EU exit uncertainty and border disruptions have all been contributing factors to the erratic nature of recent UK and global trade. Understanding the impacts of EU exit will be analysed over a longer time period and cannot be attributed to a single month movement in trade data.

The collection of goods data is carried out by HM Revenue and Customs (HMRC). During the coronavirus (COVID-19) pandemic and in preparation for the end of the transition period, we and HMRC took steps to preserve the quality of the data.

Before 31 December 2020, data on UK trade with the EU were collected through the Intrastat statistical survey. This requires traders to declare the value and volume of commodities traded with EU member states within the relevant month of physical goods movement, if the business trades above the Intrastat thresholds (£250,000 per year for UK exports to the EU and £1.5 million for UK imports from the EU).

Response rates for this survey had always been above 90%. At the height of the first UK national lockdown in March 2020, the initial response rate dropped to around 75%.

Before delivering the data to us, HMRC undertake a series of regular compliance activities, focusing on analysis, operational activity and trader contact. In addition, to support the lower response rate, HMRC developed analytical toolkits to monitor historical and current trading patterns and identified top businesses (based on value traded) for priority contact calls before finalising data for delivery. This positive action helped improve the final response rate to just under 90%.

Whether the UK exited the EU with a comprehensive free trade agreement or with no deal, it was evident that the collection of trade in goods would change.

Historically, UK to EU goods data collection was through Intrastat and UK to rest of the world (ROW) trade movements were collected from custom declarations.

From 1 January 2021, Great Britain (GB) exports to the EU will be collected directly from customs export declarations made according to the requirements of the Taxation (Cross Border Trade) Act (Table 1). The customs declaration requirements are more complex than the single monthly aggregated Intrastat return, and can result in differences between dates of declaration and actual movement of the goods out of the country.

The Intrastat survey will continue to be collected for goods exported from Northern Ireland to the EU, under the terms of the Northern Ireland Protocol.

Both the GB to EU customs export declaration data and NI Intrastat export (dispatch) data will be incorporated into the overall UK to EU export dataset.

Table 1: UK trade flow collection operations from January 2021

Flow	Data source – January 2021	Data source – January 2022
GB exports to rest of world	Custom export declarations	Custom export declarations
GB imports from rest of world	Custom import declarations	Custom import declarations
GB exports to EU	Custom export declarations*	Custom export declarations
GB imports from EU	Intrastat	Custom import declarations*
NI exports to rest of world	Custom export declarations	Custom export declarations
NI imports from rest of world	Custom import declarations	Custom export declarations
NI exports to EU	Intrastat	Intrastat
NI imports from EU	Intrastat	Intrastat

Source: Office for National Statistics - UK trade

Notes

1. * reflects a change in the collection method for trade in goods statistics.

As a result of the changes and differences outlined above, there will be a break in the timeseries for published UK to EU export statistics from January 2021. These will not be directly comparable to UK to EU export statistics published for previous months and years.

The recording of UK imports from EU will not be impacted by any change in 2021, as the Intrastat survey will continue to operate for all UK (GB and NI) imports (arrivals) from the EU, to mitigate the effects of staging customs controls, and to comply with the Northern Ireland Protocol. Intrastat is the long-term data collection mechanism for NI imports from and exports to the EU, and for 2021 only GB imports from the EU. While there are no methodological changes being introduced to the survey, HMRC is implementing further procedures to ensure good quality data continues for 2021. These include:

- additional analysis at a granular trader level, including trader profiling; comparing current commodity and partner country data with historical trends

- drawing on insights from returned GB to EU import custom declarations, as not all traders will delay their declarations, for example this will enable comparisons with Intrastat returns

- increased trader contact and analysis of Northern Ireland returns

- use of other insight material such as ONS Business Insights and Conditions Survey (BICS) and evidence from other government departments

For GB to EU exports, where collection moves to custom declarations, this change in processing includes an assumption that goods for export have departed the UK 15 days after customs clearance, if not specifically notified by the declarant. This can mean that some exports are recorded in the following month after their actual movement. As an example, this could mean up to 15 days of January trade exports could be reported in the February data and so on. As custom declarations were only introduced for EU exports from January 2021, we would not see any data from the customs systems from December in January.

Following an agreement between us and HMRC, the assumed departure has been reduced from 15 to 5 days, where this has not been notified by the declarant. This has been implemented at targeted export locations which are predominantly engaged in EU trade. This enables the majority of trade to be assigned to the most appropriate month when the movement occurred.

For GB to rest of the world (RoW) exports trade, we cannot rule out a small element of trade also being carried out at these targeted locations and therefore may expect to see a very small boost of trade in January, that would have previously fallen in February. However, from analysis of trade data, we expect this impact to be minimal and will not affect the overall trade pattern for RoW data. This change only impacts January 2021 figures.

3 . Trade in services practical challenges

The collection of trade in services data has been heavily impacted by COVID-19, which is more reliant on business surveys compared with goods collection.

Within our trade statistics, data from the International Passenger Survey (IPS) are the main source for travel services, which comprises over 20% of our trade in services estimates. As IPS interviewers were recalled midway through March 2020, our priority has been to find new ways to collect and report on the impact of COVID-19 on UK travel services. We have developed a statistical model that estimates the value and volume of UK imports and exports of travel services, which draws on a range of highly predictive data sources including:

- the Monthly Business Survey (MBS) data on turnover of travel and transport sectors
- Civil Aviation Authority flight data
- lorry traffic data from the Department for Transport
- ports and shipping data from HMRC

This ensures we cover the variety of data that the IPS is currently used for. This model is informing the travel services estimates published in our trade releases from May 2020 and, with the range of data sources, is highly predictive. We will continue to investigate new data sources that may refine the model further. As a result of the national lockdowns, international travel services are currently very low.

The International Trade in Services (ITIS) Survey makes up over 50% of trade in services data. Before 2020, the collection method for this survey was paper-based and achieved response rates for the quarterly survey were between 20% and 25% at preliminary stage, rising to over 80% at final stage. However, as a result of the coronavirus pandemic, many businesses began moving to a working from home arrangement or temporarily suspended business activity. This resulted in further reductions in response rate at preliminary stage.

To support these lower response rates, we introduced an improved imputation method into the survey to ensure non-response estimates better captured the nature of unpredictable business activity. We also introduced the linkage of data source responses (ITIS and Business Insights and Conditions Survey (BICS) responders) to adjust our imputation method to better account for businesses who have temporarily paused trading activity. We continue to use these methods to deliver quality data but believe, in comparison with trade in goods estimates, the published services estimates are subject to higher levels of uncertainty.

Some of this uncertainty is reflected in the increased size of gross domestic product (GDP) balancing adjustments that we have recently applied to services account. These adjustments are helping to preserve a more credible quarterly path for trade in services that, we believe, is our best estimate of how the data will settle as system forecasts are replaced as higher survey response rates are achieved.

To safeguard against ITIS response rates falling further, we took immediate steps to re-platform collection. We were able to move quickly and achieved a fully online survey collection for our final quarterly estimate (approximately 20 weeks after the reference period) of Quarter 2 (Apr to June) 2020, with a response rate above 80%.

Finally, we also recognise that, due to the timeliness of survey returns, there is a longer lag in publishing granular services accounts data compared with the equivalent commodities data for goods. While we continue with our regular statistical practices, we are also taking the opportunity to develop a series of high frequency indicators to help inform the official estimates. Data sources feeding into the model include Index of Services, Index of Construction, road traffic and shipping data. Trade in goods data will also be used due to the interconnected nature of goods and services economies.

We also receive a range of other data from various sources and government departments which feed into our trade in services estimates. We have been in regular communication with data suppliers ensuring this data has continued to be provided, and we have been assured of its continued quality.

4 . Data challenges – interpreting trends around COVID-19 and EU exit

Trade has not been typical in recent months and, because of the practical challenges noted in Sections 2 and 3, we would encourage users to apply caution when making short-term comparisons of trade movements. The combined effects of coronavirus (COVID-19) national and international lockdown restrictions, EU exit uncertainty and border disruptions have all been contributing factors to the erratic nature of recent UK and global trade. As data emerge, we will look to explain the movements as much as possible.

During Quarter 1 (Jan to Mar) 2020, governments across the world started to implement lockdown and border restrictions in order to reduce the spread of COVID-19. The first half of 2020 saw falls in both goods and services and resulted in the three months to June 2020 seeing the largest fall in both exports and imports (excluding precious metals) since comparable records began in 1998. Services trade in travel and tourism has been particularly badly hit; this includes personal holidays and business travel. Restrictions on travel introduced in response to the pandemic significantly affected global tourism, with an 81% drop in international arrivals in July 2020, and showing no or little signs of recovery in the subsequent months of last year.

The latter half of 2020 saw some recovery in the levels of imports and exports of goods, coinciding with the UK and some of our major trading partners beginning to lift lockdown restrictions. However, rising COVID-19 cases at the end of 2020 again resulted in increased lockdowns and border restrictions for many countries worldwide, including the UK. This included the sudden closure of the UK-France border in December because of fears over the UK variant of COVID-19 and resulted in delays especially for freight traffic with the EU. These restrictions will likely impact on trade in goods and services at the start of 2021.

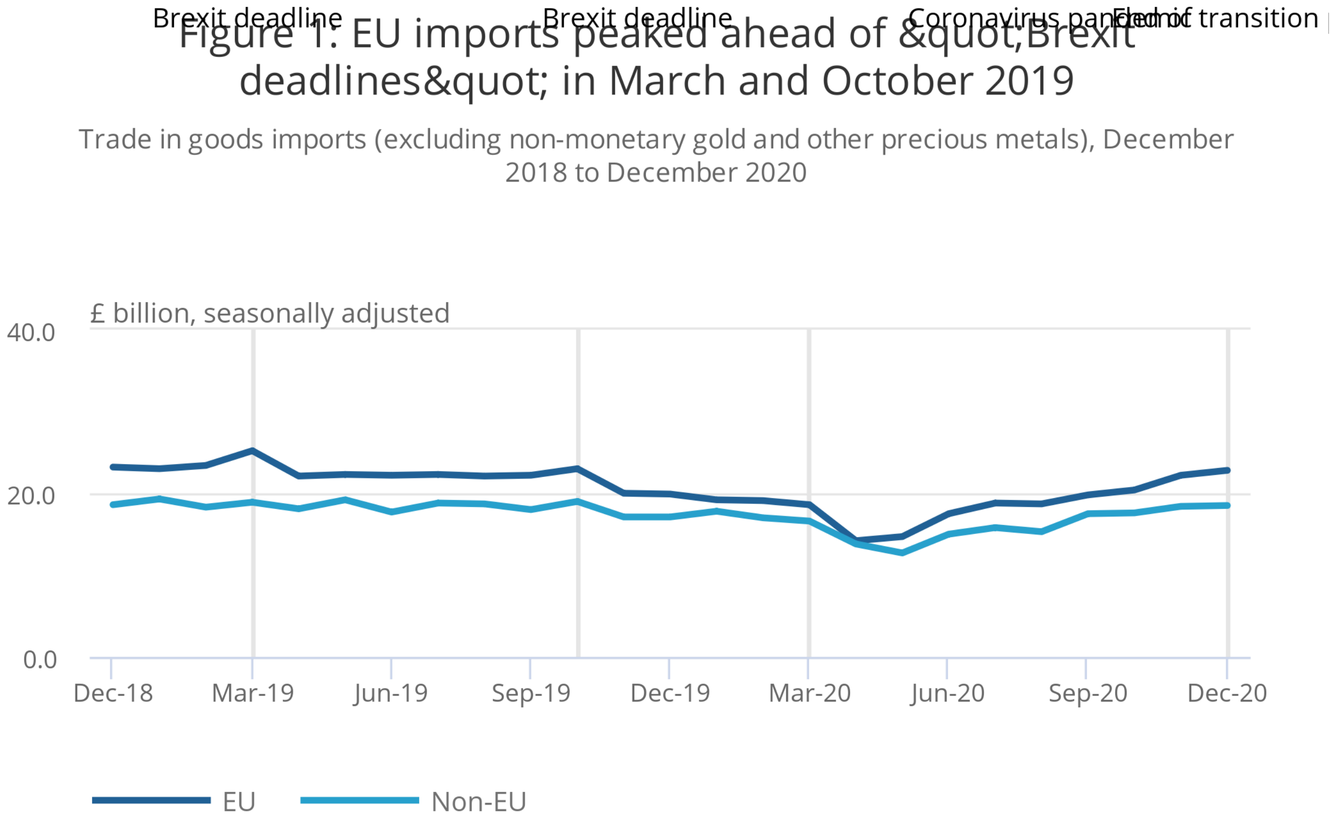
There may be less demand for certain goods and the ability for companies to conduct trade in services; these are heavily reliant on the free movement of people across international borders, which may continue to be lower due to ongoing international travel restrictions. We will continue to analyse and disseminate these trends in coming publications.

Stockpiling

Analysis of trade data around the previously proposed EU withdrawal dates (29 March 2019 and 31 October 2019) showed an impact on trade flows and evidence of business stockpiling (Figure 1). Imports of commodities such as raw materials and medicinal and pharmaceutical products spiked prior to the anticipated dates for withdrawing from the EU, before falling in the following months as businesses used up those stocks. Our [monthly trade bulletins] have recently included additional commentary that has explained where stockpiling has occurred and how the unwinding of stocks has attributed to an erratic monthly profile.

Figure 1: EU imports peaked ahead of "Brexit deadlines" in March and October 2019

Trade in goods imports (excluding non-monetary gold and other precious metals), December 2018 to December 2020



Source: Office for National Statistics - UK trade

Our data suggest that some businesses were also stockpiling at the end of 2020. This is not a new situation as we saw evidence of businesses stockpiling around the previously proposed EU withdrawal dates. The reasons for the more recent Quarter 4 (Oct to Dec) 2020 stockpiling could be as much because of the ongoing pandemic as the end of the EU transition period on 31 December 2020. A trade deal was not agreed until 24 December 2020 and therefore some of the stockpiling may be linked to increased uncertainty around the UK's future trading relationship with the EU. The types of commodities that saw EU import spikes in Quarter 4 2020 – which included machinery and transport equipment – are consistent with spikes we saw ahead of previous EU exit deadlines. However, for some commodities, such as medicinal and pharmaceutical products, the evidence for stockpiling links to both COVID-19 and EU exit, as healthcare businesses were [asked by the government to stockpile a six-week supply of products ahead of Brexit], but the rapid increase in coronavirus cases during December 2020 could also have affected this rise.

We recently published an article analysing further the [impacts of stockpiling on trade data].

Given the complexity of measuring the economy during 2020, it is not possible to fully reconcile the evidence of stockpiling in imports data with the headline inventories data – both discussed in our GDP quarterly national accounts, UK: July to September 2020 release. Textual analysis from the quarterly stocks survey suggests that some businesses increased their stocks in the lead up to the UK's departure date from the European Union, taken together with the imports data this shows evidence of some stockpiling in preparation for the end of the UK's transition period with the EU, but we currently are unable to clearly quantify the effect of this.

5 . Related links

More about coronavirus

- Find the latest on coronavirus (COVID-19) in the UK.
- Explore the latest coronavirus data from the ONS and other sources.
- All ONS analysis, summarised in our coronavirus roundup.
- View all coronavirus data.
- Find out how we are working safely in our studies and surveys.

More about EU exit

- Stockpiling ahead of the Brexit deadline.
- Business insights and impact on the UK economy.