

Coronavirus and the latest indicators for the UK economy and society methodology

Latest quality and methodology information for early experimental data on the impact of the coronavirus (COVID-19) on the UK economy and society. These faster indicators are created using rapid response surveys, novel data sources and experimental methods.

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1 . Overview of faster indicators data

During the coronavirus (COVID-19) pandemic, we have been providing timely indicators of the effect of the disease on the UK economy and society in our [Coronavirus and the latest indicators for the UK economy and society bulletin](#).

These statistics have been produced quickly in response to developing world events. The Office for Statistics Regulation, on behalf of the UK Statistics Authority, has [reviewed](#) them against several important aspects of the Code of Practice for Statistics and regards them as consistent with the Code's pillars of Trustworthiness, Quality and Value.

The faster indicators are compiled using a variety of different data sources. On a regular basis, the following indicators are included:

- Business Impact of Coronavirus Survey (BICS), looking at the economic impact of the coronavirus
- Opinions and Lifestyle Survey (OPN), looking at the social impact of the coronavirus
- experimental online job advert indices covering the UK job market, using data from job advert aggregating website Adzuna
- experimental online weekly price changes for a selection of food and drink products
- monthly Value Added Tax (VAT) diffusion indexes and new VAT reporters using data from HM Revenue and Customs (HMRC) VAT returns
- weekly and daily shipping data from exactEarth using the UN Global Platform
- daily indices of footfall in retail destinations at a UK level, using data from Springboard, a provider of data on customer activity
- weekly Energy Performance Certificates (EPCs) data for new and existing dwellings in England and Wales
- weekly Companies House data for company incorporations and voluntary dissolutions in the UK

New experimental data and indices are included as and when new data become available, either on a stand-alone or regular basis as appropriate, with the relevant methodology information listed on this page.

2 . How we measure faster indicators

This section details how we measure the various faster indicators included in the bulletin with links to more detailed methodology pages where required. It will be updated regularly as new indicators are added to the bulletin or methodological improvements are made to existing indicators.

Company incorporations and voluntary dissolutions

Weekly indicators of company creation and closures are based on data from [Companies House](#), working in collaboration with us. These include weekly series of the number of company incorporations (creations) and voluntary dissolutions (one type of closure) per working day in that week, along with a quarterly back series to Quarter 1 (Jan to Mar) 2019.

More detailed information on the data source, quality and methodology for the weekly indicators of company incorporations and voluntary dissolutions is available in [Weekly indicators of company creations and closures from Companies House methodology: August 2020](#).

Footfall

Springboard's footfall data are captured via a network of automated counters located in high streets, shopping centres and retail parks across the UK. The counter employs technology that identifies humans within a defined "zone" and logs each human as a number in a file. The counters operate 24 hours a day, seven days a week and data are captured continuously. The technology is highly accurate and able to identify individual humans even where there are very large volumes of people.

Types of establishment included and not included

Springboard's footfall data include footfall within three main types of retail destination – high streets, shopping centres and retail parks. It does not include footfall in leisure and sports venues, conference venues, transport interchanges, motorway service stations, art galleries, museums and historic monuments.

Definitions

Overall footfall

The overall footfall is the sum of the average footfall in each destination type (high streets, retail parks and shopping centres) weighted by their respective footfall volumes.

Shopping centre

A shopping centre is a space, fully owned and managed by a single landlord, which can be fully or partially enclosed or completely open but does not form part of the public highway. A shopping centre is distinguished from a retail park by a smaller unit size.

High street

High street refers to a town centre rather than a shopping centre (defined previously). It is the central part or main business and commercial area of a town, comprising the high street, which is the traditional site for the majority of shops, banks, and other businesses.

Retail park or shopping park

A retail park or shopping park is a space wholly owned and managed by a single landlord, solely comprising retail warehouse units and generally comprising a minimum of 30,000 square feet of retail space. Retail parks have a minority of units occupied by traditional high street non-food retailers, while in a shopping park the majority of units are occupied by high street non-food retailers.

Unit of measurement

Springboard's footfall data record the volume of activity entering a retail park or shopping centre, or within a town centre. It is not recording footfall into stores, but into retail destinations.

Business Impact of Coronavirus (COVID-19) Survey

The business indicators are based on responses from the voluntary, fortnightly [Business Impact of Coronavirus \(COVID-19\) Survey \(BICS\)](#), which captures business' views on impact on turnover, workforce, prices, trade and business resilience. The survey questions for the latest period are available in [Business Impact of Coronavirus \(COVID-19\) Survey questions](#).

The sample design for BICS was reviewed and refreshed for wave 7, sent out on Monday 15 June. This new sample design will be the basis for future waves and the questionnaire will go to approximately 24,500 businesses from wave 7 onwards. This sample redesign improves the coverage for the smaller sized businesses.

The sample from wave 7 onwards has a breakdown of approximately 7,400 businesses with employment for 250 and over and approximately 17,100 for employment between 0 and 249. This breaks down further for approximately 5,000 for employment between 0 and 99 and 12,100 for employment between 100 and 249.

Estimates from the BICS are currently unweighted and should be treated with caution when used to evaluate the impact of the coronavirus pandemic across the UK economy. Each business was assigned the same weight regardless of turnover, size or industry.

More information on the quality and methodology, including response rates, sample size and weighting, is available in the "Measuring the data" section of the [Coronavirus and the economic impacts on the UK](#) bulletin.

Social impact of the coronavirus (OPN)

Data on the social impact of the coronavirus on Great Britain were collected from the Opinions and Lifestyle Survey (OPN).

The main questions asked of respondents were:

- In the past seven days, have you avoided contact with older people or other vulnerable people because of the coronavirus (COVID-19) outbreak?
- In the past seven days, for what reasons have you left your home?
- In the past seven days, have you worked from home because of the coronavirus (COVID-19) outbreak?
- In the past seven days, have you self-isolated because of the coronavirus (COVID-19) outbreak?
- In the past seven days have you visited a park or public green space?

Full response categories included in the series "Either not left home or only left for work, exercise, essential shopping, medical need" were:

- travelling to and from work
- for exercise, for example a run, walk or cycle – alone or with members of your household
- shopping for basic necessities
- any medical need, or to provide care or to help a vulnerable person

This series is not an estimate of compliance, as guidance on reasons to leave home have changed through the weeks that data have been collected.

More information on the quality and methodology of the OPN is available in the “Measuring the data” section of the [Coronavirus and the social impacts on Great Britain](#) bulletin.

Online job advert estimates

These estimates are experimental and will be developed over the coming weeks. More information on the methodology used to compile these estimates is available in [Using Adzuna data to derive an indicator of weekly vacancies: Experimental Statistics](#).

Online price changes data

Prices are scraped daily from several large online UK retailers (typically supermarkets and other prominent high-street chains with an online presence). Prices have been collected from 1 June 2020 for selected items chosen to form the new basket. A full list of items is available in the [dataset](#).

The items in this basket have been chosen to align with items collected in our official consumer price statistics in the food and non-alcoholic beverages and alcohol categories. Items in our official consumer price statistics are chosen to be representative of the market and consumer purchasing behaviour, therefore this basket follows the same weighting principles. For more information on this process, please see our [Consumer Prices Indices Technical Manual, 2019](#).

An average weekly price is calculated for each unique product, and the change in the average weekly price over time is used to construct the price index.

More information on the quality and methodology of the online price changes data is available in the [Online weekly price changes methodology](#).

Shipping indicators

These weekly and daily faster shipping indicators data are created through new [experimental](#) methods and are not [official statistics](#). More quality and methodology information is available in [Faster indicators of UK economic activity: more timely and relevant shipping indicators](#).

The seasonally adjusted and trend estimates are estimated using a version of the seasonal adjustment method TRAMO-SEATS modified to deal with higher frequency time series. This method is available in an R package “rjdhf” (National Bank of Belgium Research Department) that calls an experimental version of the seasonal adjustment software JDemetra+. The seasonally adjusted and trend estimates are based on decomposing an ARIMA model that results in a set of moving average filters whose weights are determined by the model. The seasonal adjustment method may be limited as the available shipping data are a short time series; it will be fine-tuned in future releases.

Energy Performance Certificates

An Energy Performance Certificate (EPC) contains information on the energy efficiency of a property and is a requirement when a property is built, sold or rented in England and Wales. New building(s) or conversions of existing buildings require an EPC once construction has been completed. To note, an EPC is valid for 10 years and can be reused as many times as required during this period. Therefore, where a property holds a valid EPC and is sold or let, it will not require a new EPC and will not appear in the data.

These data are [experimental](#) and based on the number of total EPCs lodged on the register held by Landmark Information Group. In accordance with the regulations, the Ministry of Housing, Communities and Local Government (MHCLG) and Landmark Information Group cannot alter data that have been lodged on the registers. Please note, the EPC figures used in our faster indicators release will include cancelled or not for issue reports and multiple reports on a single Unique Property Reference Number, although be aware individual buildings may have more than one certificate.

These administrative data are subject to continuing quality investigation and improvement. They have been released because they have been judged to be of immediate value to interested parties and to encourage user feedback. Further technical information on data quality and technical notes are available in the [Energy Performance of Buildings Certificates quarterly statistics collection](#).

A consolidated [glossary](#) of all the terms related to Energy Performance of Buildings Certificates is available on GOV.UK.

Value Added Tax (VAT)

Value Added Tax (VAT) diffusion indices are created through new [experimental](#) methods and are not [official statistics](#).

Estimates for the diffusion indices are based on matched businesses who have responded in both periods of interest. If a business uses the VAT deferral scheme, they should continue to submit VAT returns as normal; the volume of VAT returns should not be affected. The number of business returns in the most recent period are a little lower than normal but this should not impact the interpretation of the results.

Please note the monthly and quarterly diffusion indices can exhibit different trends as only a subset of firms contribute towards the monthly diffusion indices. Quarterly returns are allocated to the calendar quarter in which two or more of the months lie. For example, a quarterly return covering the period March 2020 to May 2020 will be allocated to Quarter 2 (Apr to June) 2020. At this stage of the quarterly data cycle, there is limited information about June 2020 feeding into the Quarter 2 2020 estimates.

For more information on how the quarterly reporting periods are derived, see [VAT reporting periods](#) in Section 2 of the VAT methodology article.

Understanding the heatmap

The heatmap displays the VAT turnover diffusion index "standard deviations from the mean". This guide aims to explain how to derive and interpret the data shown in the heatmap using the turnover diffusion indices given in the [dataset](#).

Step 1

Calculate the mean and the standard deviation of the turnover diffusion index between 2008 and 2019. This calculation produces a unique mean and standard deviation of the turnover diffusion index for each industry and time frequency (monthly or quarterly data). The heatmap illustrates the all industry index and is broken down by agriculture, production, construction and service sectors.

Standard deviation is a statistical calculation that measures how widely values in a dataset are dispersed from the average. A smaller standard deviation indicates most values are close to the average, whereas a larger standard deviation indicates values are widely spread from the average.

To calculate the standard deviation for each diffusion index:

- subtract the mean from each individual diffusion index and square the result which gives the square differences
- each individual squared difference result of step one is summed, and an average of the square differences is derived
- this gives the variance, taking the square root of the variance gives the standard deviation

Step 2

Calculate the "standard deviations from the mean" displayed in the heatmap using the formula:

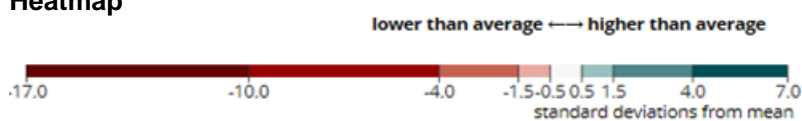
Standard deviations from the mean =

(diffusion index minus mean of series) divided by standard deviation of series

Step 3

The thresholds for the calculated "standard deviations from the mean" in step 2 are based on the current rule and allocated the relevant colour.

Heatmap



Between 7.0 and 4.0 standard deviations from mean - dark green

Between 4.0 and 1.5 standard deviations from mean - light green

Between 0.5 and negative 0.5 standard deviations from mean - white

Between negative 0.5 and negative 1.5 standard deviations from mean - light red

Between negative 1.5 and negative 4.0 standard deviations from mean - dark red

Between negative 4.0 and negative 10.0 standard deviations from mean - very dark red

Between negative 10 and negative 17.0 standard deviations from mean - brown

Interpreting the heatmap

As at data published on 9 July 2020, the latest diffusion indices were available up to Quarter 2 (Apr to June) 2020 for quarterly data, May 2020 for monthly data, and June 2020 for new reporters.

For example, the all industry quarter-on-quarter diffusion index for Quarter 2 2020 was negative 14.6. This can be interpreted as the all-industry turnover diffusion index for Quarter 2 2020 compared with Quarter 1 2020 was 14.6 standard deviations below its own diffusion index historical average from 2008 to 2019. Therefore, the larger negative indicates the diffusion index is significantly below its historical average. The underlying all industry turnover diffusion index for Quarter 2 2020 is negative 0.38. The negative figure indicates that far more firms had decreasing turnover than increasing turnover in the latest period.

More quality and methodology information is available in [Faster indicators of UK economic activity: Value Added Tax returns](#).

3 . Strengths and limitations of faster indicators

This section details the strengths and limitations of the various faster indicators included in the bulletin with links to more detailed methodology pages where required.

Company incorporations and voluntary dissolutions

The indicator is high frequency and timely – the only weekly data on company creations and closures available for the UK, published 6 days after the reference period.

Experimental data based on a new processing system at Companies House, data subject to revision, and not entirely consistent with quarterly official statistics publication from Companies House.

More detailed information on the strengths and limitations of the weekly indicators of company incorporations and voluntary dissolutions is available in [Weekly indicators of company creations and closures from Companies House methodology: August 2020](#).

Footfall

Year-on-year footfall estimates compare the same day rather than date; for example, Tuesday 30 June 2020 is compared with Tuesday 2 July 2019 (last year was two days ahead of this year because of the leap year).

However, there are no adjustments for bank holidays. For example, as the date of Easter changes each year, the data will be comparing Easter Sunday in 2019 with a Sunday in 2020 that is not Easter.

Business Impact of Coronavirus (COVID-19) Survey

The Business Impact of Coronavirus (COVID-19) Survey (BICS) is voluntary and responses are qualitative, which should be treated with caution as results reflect the characteristics of those who responded and not necessarily the wider business population.

These data should not be used in place of [official statistics](#). The survey was designed to give an indication of the impact of the coronavirus on businesses and a timelier estimate than other surveys.

More information on the strengths and limitations of the BICS data is available in the "Strengths and limitations" section of the [Coronavirus and the economic impacts on the UK](#) bulletin.

Social impact of the coronavirus (OPN)

More information on the strengths and limitations of the Opinions and Lifestyle Survey (OPN) is available in the "Strengths and limitations" section of the [Coronavirus and the social impacts on Great Britain](#) bulletin.

Online job advert estimates

These estimates are [experimental](#) and will be developed over the coming weeks. Information on the strengths and limitations of these estimates is available in [Using Adzuna data to derive an indicator of weekly vacancies: Experimental Statistics](#).

Online weekly price changes

These experimental online price changes data should not be compared with the headline [Consumer Prices Index including owner occupiers' housing costs \(CPIH\)](#). The CPIH is produced using different methods, data and quality thresholds, and it incorporates a broader range of goods and services, such as housing.

More information on the strengths and limitations of the online price changes data is available in the [Online weekly price changes methodology](#).

Energy Performance Certificates

The weekly data will differ from daily and monthly figures published on the [Landmark Information website](#) because of overlaps of weekly figures (that is, Week 27 includes five days in July as well as days in June).

Shipping indicators and Value Added Tax (VAT)

It should be noted that these indicators are not intended to be an early measure or predictor of gross domestic product (GDP), and their potential relationship with headline GDP should be interpreted with caution. Instead, they provide an early picture of a range of activities that are likely to have an impact on the economy, supplementing official economic statistics.

Publication of coronavirus-related data

We will publish this bulletin on a weekly basis during the coronavirus pandemic. This is to ensure we are meeting user needs for more timely data. We will be adding new data and experimental indicators as and when data become available each week.

This publication will include regularly updated data from the new fortnightly BICS survey, weekly indicators from the OPN on the social impact of the coronavirus, online job adverts from Adzuna, online weekly price changes, weekly and daily shipping indicators, and monthly VAT diffusion indices.

4 . Related links

[Coronavirus and the latest indicators for the UK economy and society](#)

Bulletin | Released weekly

New data and experimental indicators on the UK economy and society, including information related to the coronavirus (COVID-19). Indicators are constructed from rapid response surveys, novel data sources and experimental methods.

[Rapid review of coronavirus, the UK economy and society, faster indicators](#)

Webpage | Released on 9 April 2020

Letter from Ed Humpherson, the Director General for Regulation at the UK Statistics Authority, endorsing the Office for National Statistics's (ONS's) new experimental faster indicators.

[Online weekly prices changes methodology.](#)

Methodology | Last updated on 10 September 2020

Latest quality and methodology information for online price indices for a selection of food and drink products from several, large UK retailers. These are experimental data created as part of the faster indicators release in response to the coronavirus (COVID-19) pandemic.

[Using Adzuna data to derive an indicator of weekly vacancies: Experimental Statistics](#)

Methodology | Last updated on 28 May 2020

Methodology information for online job advert indices covering the UK job market. These are experimental data created as part of the latest indicators release in response to the coronavirus (COVID-19) pandemic.

[Weekly indicators of company creations and closures from Companies House methodology: August 2020](#)

Methodology | Last updated on 6 August 2020

Methodology information on the weekly indicators of UK company incorporations and voluntary dissolutions using data from Companies House.

[Coronavirus and the economic impacts on the UK](#)

Bulletin | Released fortnightly

The indicators and analysis presented in this bulletin are based on responses from the new voluntary fortnightly business survey, which captures businesses' responses on how their turnover, workforce, prices, trade and business resilience have been affected by the coronavirus (COVID-19) in the two-week reference period

[Coronavirus and the social impacts on Great Britain](#)

Bulletin | Released weekly

Indicators from the Opinions and Lifestyle Survey to understand the impact of the coronavirus (COVID-19) pandemic on people, households and communities in Great Britain.

[Faster indicators of UK economic activity: more timely and relevant shipping indicators](#)

Blog | Released on 19 November 2019

Background and methodology information for the weekly and daily shipping data. These are experimental data created as part of the latest indicators release.

[Faster indicators of UK economic activity: Value Added Tax returns](#)

Blog | Released on 18 March 2019

Background and methodology information for the Value Added Tax (VAT) diffusion indexes and new VAT reporters. These are experimental data created as part of the latest indicators release.