Economic activity and social change in the UK, real-time indicators methodology

Methodology for the data collection, aggregation, analysis and presentation for the real-time indicators bulletin.

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1 . Overview of real-time indicators data

Since March 2020, we have been collecting and publishing faster data on the UK economy and society. These real-time indicators are official statistics in development and are available in our Economic activity and social change in the UK, real-time indicators bulletin.

All of our indicators are developed in response to current world events and are produced quickly to provide relevant, timely insights.

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.

This article details the methodology for the data collection, aggregation, analysis and presentation of our real-time indicators.

These indicators are created using rapid response surveys, novel data sources and innovative methods. Each indicator aligns with one of four categories: consumer behaviour; business and workforce; energy and housing; or transport.

Our current indicators by category are as follows.

Consumer behaviour

- Automotive fuel spending: weekly data from aggregated, anonymised card spending data and road fuel price statistics (Department for Energy Security and Net Zero)
- Direct Debit failure rate and average transaction amount: monthly anonymised and aggregated Direct Debit data detailing average Direct Debit transaction amounts and Direct Debit failure rate (Vocalink and Pay.UK)
- UK retail footfall: weekly and monthly data showing retail footfall in the UK (BT Active Intelligence)
- Opinions and Lifestyle Survey: initial findings from our monthly ONS Opinions and Lifestyle Survey to assess public opinions on household spending and cost of living
- Revolut debit card transactions: weekly card spend data of debit card users from Revolut, a financial technology company with over 9 million users in the UK

Business and workforce

- Advanced notification of potential redundancies: weekly HR1 forms submitted by employers to the Insolvency Service's Redundancy Payments Service
- Business Insights and Conditions Survey (BICS): a voluntary twice-monthly business survey to deliver real-time information to help assess the impact of issues and events affecting UK businesses and the economy
- Online job advert estimates: monthly online job advert indices covering the UK job market, using aggregated job advert data from the Textkernel websitesses:
- Sales and jobs in small businesses: monthly data taken from Xero, a global small business platform with over 1.2 million subscribers in the UK
- Value Added Tax (VAT): monthly diffusion indices and new VAT reporters using data from HM Revenue and Customs (HMRC) VAT returns

Energy and housing

- Energy Performance Building Certificates (EPCs): weekly data of EPCs for new and existing dwellings in England and Wales, taken from the EPC register held by the Ministry of Housing, Communities and Local Government (MHCLG)

- Renter affordability for new tenancies: monthly rent affordability data calculated as the proportion of monthly income spent on rent for new tenancies as provided by Dataloft

- System Average Price (SAP) of gas: daily and seven-day rolling average changes in gas prices, using the SAP of gas from the National Grid

- System Price of electricity: daily and seven-day rolling average changes in electricity prices, using the system price of electricity from Elexon

Transport

- Shipping indicators: weekly shipping data from exactEarth using the UN Global Platform

- UK flight data: daily flights data from EUROCONTROL comprising international arrivals and departures to and from the UK (including Crown dependencies) and domestic UK flights, but excluding overflights (flights that pass over UK territory)

- Monthly UK vehicle registration and production data: from the Society of Motor Manufacturers and Traders (SMMT)

New indicators and data are included as and when they become available. Equally some indicators may stop being updated. The relevant methodology information listed on this page is regularly updated to reflect these changes. The datasets for indicators which are no longer updated, are still available in our related data pages of our bulletin.

2 . How we measure real-time indicators

Each indicator included in our publication has been assessed for its eligibility to form part of the real-time indicators suite. This section details the overarching eligibility criteria for each of our real-time indicators. This is regularly updated to ensure our indicators are timely and the data meets user needs.

Assessment of eligibility includes an indicator's ability to demonstrate: relevance to monthly, quarterly or annual gross domestic product (GDP); the time delay which accompanies sourcing the most up-to-date data; and whether the data sourced are a valid and timely measure for an economic industry of interest.

Some of our indicators are seasonally adjusted. This is to reduce the impact of seasonal variations on our estimates. How our estimates are seasonally adjusted is detailed in our technical user summary.

The subsequent sections of this methodological article detail the specific methodology for each of our real-time indicators, as well as the strengths and limitations for each indicator. Links to more detailed methodology pages are provided where available. Please note, this article will be updated regularly as new indicators are added, or methodological changes are made to existing indicators.

3 . Consumer behaviour indicators

Automotive fuel spending insights

This indicator measures "Estimated quantity of automotive fuel demand per transaction", "Average UK retail pump prices" and "Average road fuel sales". Data are sourced from anonymised and aggregated card spending data and the Department for Energy Security and Net Zero (DESNZ).

Estimated quantity of automotive fuel demand per average transaction is used to isolate real demand after adjusting for growth in fuel prices. This indicator captures how consumer demand for fuel per visit changes in response to changing fuel prices at pumps over time.

Average UK retail pump prices for petrol and diesel is an indicator compiled from six automotive fuel retailers (DESNZ).

Average road fuel sales (litres) are included in this series to provide a UK representative overview of automotive fuel trends and are updated monthly (DESNZ).

The data are presented as year-on-year growth to reduce the impacts of seasonality in card spending data. Data are available as weekly and monthly estimates. As official statistics in development, these data are subject to revisions as our methodology and systems are refined. Information on the methodology, strengths and limitations of these data are available in our Behavioural impact of rising automotive fuel prices on UK consumers Quality and Methodology Information (QMI.

Direct Debit failure rate and average transaction amount

This indicator measures "Average Direct Debit transaction amount" and "Direct Debit failure rate". The aggregated and anonymised dataset is made available to us by Pay.UK and Vocalink. They operate and provide the infrastructure for the UK's retail interbank systems, through which over 70% of household bills are processed.

Only Direct Debits (DDs) sent by accounts identified as belonging to individuals (consumers) are included in our indicator. These accounts were identified using the same account classification methodology outlined in our Industry-to-industry payment flows, UK: 2019 to 2025 article and our Industry-to-industry monthly payments, UK QMI.

These measures are presented across six categories:

- energy (electricity and gas)
- water
- fitness facilities
- mortgages
- loans
- other

DDs attributed to these categories are determined by keyword association. Overall totals for DDs to all organisations are also presented for both measures, alongside benefits received and salary quintile.

"Average DD transaction amount" is the mean monetary value (pounds sterling) of a transaction calculated as: $averagevalue = (valueofDirectDebittransactions) / (numberofDirectDebittransactions)$

All average DD transaction values presented for a given category are indexed to the average DD transaction value in 2023 for that category.

"DD failure rate" is the proportion of attempted DD transactions that fail because of insufficient funds, calculated as:

$$failurerate = (numberoffailedDirectDebittransactions) / (numberofattemptedDirectDebittransactions)$$

In addition to aggregated values for all individuals, we provide disaggregated breakdowns of these measures by state benefit and salary/wage income quintiles.

Accounts are identified as being in receipt of a specific state benefit if they receive a Direct Credit (DC) from the Department for Work and Pensions (DWP) or HM Revenue and Customs (HMRC), or the Scottish or Northern Irish equivalent, corresponding to that benefit at any point within the calendar year. Coverage is assessed by comparing both the number of identified accounts and value of payments with published statistics from relevant departments.

In total, 14 different benefits are included:

- Attendance Allowance
- Carer's Allowance
- Child Benefit
- Disability Living Allowance
- Employment Support Allowance
- Industrial Injuries Allowance
- Jobseeker's Allowance
- Maternity Allowance
- Pension Credit
- Personal Independence Payments
- State Pension
- Tax Credit (Working or Child)
- Universal Credit
- Winter Fuels Allowance

Where a Social Security Scotland benefit directly corresponds to a DWP benefit, accounts receiving these benefits have been grouped together.

Salary and wage income is identified using Real Time Information hashes, which are an accounting reference historically attached to DCs that correspond to either wage/salary payments or private pension payments. While the use of the Real Time Information hashes became non-mandatory from the start of the 2023/2024 financial year and has since declined, a substantial volume remains and observed trends are stable.

To distinguish between wage/salary and pension income, Real Time Information hashed payments to accounts receiving pension-age benefits and payments from identified private pension providers are excluded. The remaining sample is then split into quintiles, for which average payment value and failure rate are calculated.

Opinions and Lifestyle Survey

The Opinions and Lifestyle Survey (OPN) covers topics relating to people's experience of daily life and events, and currently includes questions about what people feel are important issues, their health, well-being and experiences of increases in the cost of living. It regularly includes questions on a range of other topics such as attitudes towards climate change and artificial intelligence; topics can be requested by government departments.

The survey covers residents of Great Britain who are aged 16 years and over. Survey questions are often added, removed or amended to reflect changing circumstances and analytical priorities.

More information on the strengths and limitations of the Business Insights and Conditions Survey (BICS) data are available in the Opinions and Lifestyle Survey Quality and Methodology Information (QMI).

Revolut debit card transactions

This indicator provides insight into the spending patterns of UK consumers on debit cards. Data are provided by Revolut, which is a financial technology company with over 9 million users within the UK financial payment sector.

Revolut is a granular and timely data source, presented on a per-account basis to account for Revolut's high user-growth over time. This enables comparisons to be made on a like-for-like basis, over a longer data time series.

Please note, Revolut customers tend to be younger and more metropolitan than the average UK consumer, so spending may not be representative of the overall UK macroeconomic situation.

Our Revolut spending by sector series presents data that comprise aggregated and mutually exclusive Merchant Category Codes. These classify businesses dependent upon their primary business category and are as follows:

- retail spending (including clothing, department, mixed retail, services and household stores)
- food and drink (including supermarkets, convenience and other food providers)
- entertainment (including membership clubs, cinemas, ticketed events, sports, galleries and tourist attractions)
- pubs, restaurants, and fast food (including pubs, nightclubs, restaurants and fast food)
- travel (including airlines, hotels and motoring)
- automotive fuel (including service stations and automated fuel dispensers)

Users should note that card spending over time is pushed upwards by the effects of both inflation on value of transactions and cash-to-card conversion where there is a shift away from cash spending towards card spending within the financial payment ecosystem. We make no adjustments for these considerations. "Betting" expenditure is fully omitted from the data as its inclusion would lead to volatility, affecting user interpretation.

The monthly series is calculated by aggregating the daily data for each day of the month, rather than the seven-day rolling average of each day. Thus, monthly data do not match aggregated seven-day rolling average data. Where data are indexed, they are indexed to the 2023 average of that series.

Information on the methodology, strengths and limitations of these data are available in our Using Revolut cardholder data to derive real-time indicators of consumer spending Quality and Methodology Information (QMI).

UK retail footfall

This indicator measures UK retail footfall from data provided by BT Active Intelligence. This is generated from aggregated and anonymised data from the EE network covering 24 million devices. The data capture footfall of UK and international visitors to retail areas. Details of the methods used to compile these data are available in the BT Active Intelligence methodology.

Our previous real-time footfall estimates were provided by MRI OnLocation. These data were gathered using different methods and therefore are not directly comparable with the new data from BT Active Intelligence.

In our bulletin, the leading metric is indexed UK retail footfall. This represents the latest levels of footfall across the UK, compared with the average level of footfall for 2023. These data have been aggregated to both weekly and monthly values, and are available by UK country and English region, and also by retail location type. The three different retail location types are:

- town and city centres
- retail parks
- district or local centres

The data are available from July 2024 onwards. This back series is not long enough to perform seasonal adjustment of the data, so caution is advised when assessing seasonal impacts.

4 . Business and workforce indicators

Advanced notification of potential redundancies

This indicator presents the number of intended redundancies from filed HR1 forms. HR1 forms are used by employers to notify the Insolvency Service's Redundancy Payments Service of potential redundancies. They are only required when firms wish to make 20 or more redundancies.

HR1 form submissions can include contractual changes, changes to pensions, or employees being transferred to new sites. As we are only concerned with permanent dismissals, we apply an automated cleaning process to remove cases that are not permanent dismissals.

Firstly, all cases with fewer than 20 proposed dismissals are excluded from the data as HR1 forms should only be submitted if the employer intends to make 20 or more dismissals.

Secondly, a case is excluded if the reason for the dismissals includes any of the following words: pension, contractual, terms and conditions, transfer, move, or TUPE (Transfer of Undertakings (Protection of Employment)).

Users should note that where data are indexed, they are indexed to the 2023 average of that data series. Additional information on the methodology used for this indicator, along with the associated strengths and limitations, are available in our Developing an indicator of potential redundancies using Insolvency Service data methodology.

Business Insights and Conditions Survey

The Business Insights and Conditions Survey (BICS) collects timely information on the effect of challenges facing the economy and other events on UK businesses. Data are collected through a twice-monthly online questionnaire from a sample of approximately 39,000 businesses, capturing businesses' experiences on topics such as:

- financial performance
- workforce
- prices
- trade and business resilience

Respondents are asked for their experiences at the time of answering the questionnaire, or over a stated reference period, which is either the last two weeks or last month. Survey questions are often added, removed or amended to reflect changing circumstances and analytical priorities. More information on the strengths and limitations of the BICS data are available in the Business Insights and Conditions Survey (BICS) Quality and Methodology Information (QMI).

Industry-to-industry payment flows

This indicator measures the monthly value and volume of payments flowing between UK industries. The dataset is compiled from a sample of anonymised and aggregated Bacs Direct Debit, Bacs Direct Credit, and Faster Payments System (FPS) payments data. It is made available to us by Pay.UK and Vocalink - the operator of, and infrastructure provider to, the UK's retail interbank payment systems.

The series is available at Standard Industrial Classification (SIC) 2-digit and 5-digit level, by International Territorial Level 1 (ITL1) region, and as SIC 2-digit by ITL1 region.

Data are not seasonally adjusted. Values are rounded to the nearest £1,000 and transaction counts to the nearest 100. Cells below the disclosure threshold are suppressed.

More information on the methodology and strengths and limitations of these data are available in our Industry-to-industry monthly payments Quality and Methodology Information (QMI) report.

Textkernel online job advert estimates

This indicator uses Textkernel online job advert data, collected from approximately 90,000 job boards and recruitment pages via comprehensive web-scraping software. The data present monthly new live online job advertisements, broken down by occupation and by region, from February 2018. Estimates are classified based upon the information included in the job advert.

These estimates were produced to align to the Standard Occupational Classification (SOC) framework, and replace our previous real-time online job advert estimates provided by Adzuna.

Even though our Textkernel data can be used to show changes in labour demand, they are official statistics in development (as explained in our guide) and should be used only as an indicator of changing labour demand. As such, as adverts are not the same as vacancies, we advise caution when comparing these estimates with the Office for National Statistics (ONS) Vacancy Survey, which are accredited official statistics. Please refer to the user guides for more information.

More information on the methodology used to compile these estimates, and their strengths and limitations, is available in our Measuring labour demand volumes across the UK using Textkernel data user guide.

Sales and jobs in small businesses

Data on sales and jobs in small businesses are taken from Xero, a global small business platform with over 1.2 million small business subscribers in the UK.

Sales are measured based on the face value of invoices issued by firms within each month (including via apps attached to the Xero account). Subscriber base changes are accounted for by measuring sales growth in one specific month using the sample of firms that also operated in the previous year.

Jobs are measured by the number of unique employees of a business who are issued a payslip in a month. One individual is counted as one "payslip" in a particular month, if they worked at least one hour in that specific month. The sample of small businesses is restricted based on the employment size band, and erroneous payslips or those identified for non-wage purposes are excluded. Percentage change in payslips is calculated using the weighted average of within-firm year-on-year growth in jobs. The calculation accounts for subscriber changes.

Small businesses are defined by Xero as organisations with annual turnover of less than £54 million for the sales metric and fewer than 250 employees for the jobs metric. Further, Xero's definition of sales and jobs does not align with definitions of official estimates of turnover and employment.

The source data are publicly available through the Xero Small Business Insights programme.

Value Added Tax flash estimates

Value Added Tax (VAT) turnover estimates are used in our UK National Accounts, where they are used to supplement survey data for industries covered by the Monthly Business Surveys. This is for both production and services, and for the construction industry.

These estimates are used as one of our business and workforce indicators, as they provide timely and real-time estimates for business turnover.

Our VAT flash estimates are based on VAT returns received by HM Revenue and Customs (HMRC) within the first seven calendar days following the end of each month. These returns are used to produce an early indicator of turnover trends.

The flash estimates are constructed using returns from businesses that report VAT monthly, meaning the dataset reflects turnover that occurred during the preceding calendar month. For example, the June flash publication includes returns received between 1 and 7 June, which report on business activity in May.

Quarterly or annual reporting businesses are not included, as they do not file returns every month and are not part of the flash estimate pipeline. As a result, the stated month in the VAT flash series closely aligns with the actual month of economic activity for the included businesses. For more information on our VAT flash estimate reporting periods, please see Section 2 of our Value Added Tax methodology article.

Currently, VAT indicators are currently split into two sections: diffusion indices and reporting behaviours.

Diffusion indices

The diffusion indices are an aggregate measure used to track whether most firms are reporting an increase or decrease in turnover in their VAT returns. They are calculated as the percentage of firms with increasing turnover minus the percentage with decreasing turnover.

Diffusion indices are presented for both turnover and expenditure, with growth rates analysed as month-on-month, and month on a year ago. Estimates presented are non-seasonally adjusted (NSA) and seasonally adjusted (SA).

The total diffusion indices for both turnover and expenditure are a sum of individual sector diffusion indices, which are individually weighted by the proportion they contribute to total gross domestic product (GDP). Weighting the individual industry indices prevents a single industry from contributing disproportionately, or skewing, the average reported change of the total diffusion index.

The seasonally adjusted diffusion index of each industry is multiplied by that industry's weight (the industry contribution to GDP) and divided by the sum of all industry weights (total GDP).

All industries are weighted based on the Blue Book values of our gross value added industry weight time series dataset. The Blue Book and industry weightings are updated annually. At present, our flash estimates are weighted in accordance with the Blue Book 2024 values of our gross value added industry weight time series dataset. As services have the greatest contribution, they have a greater contribution to the total index.

All indices are constructed to lie between 1 and negative 1. An index of 0.1 means that 10% more firms reported an increase in turnover compared with the previous month than those reporting a decrease in turnover. Conversely, an index of negative 0.1 means that 10% more firms reported a decrease in turnover compared with the previous month. An index of 0.0 means that the same number of businesses saw an increase in turnover as saw a decrease.

We have used the standard deviations of the seasonally adjusted series to calculate upper and lower 95% confidence limits. These are presented in the bulletin to help users identify statistically significant results in the diffusion indices.

Reporting behaviours

Reporting behaviours cover counts of all VAT reporters, regardless of reporting period or record type. These are broken down by section and grouped into sections based on the VAT unit's primary Standard Industrial Classification (SIC).

New reporters are counts of VAT reporters that have not previously submitted a VAT return, broken down by section.

Record type is all VAT reporters, broken down by whether the business is paying tax, reclaiming tax, re-inputting to pay or reclaim tax (correcting a mistake prior to submitting the return), or submitting a replacement to pay or reclaim tax (correcting a mistake after submitting the return).

For more methodological detail as to how the VAT flash estimates are produced, please see our Faster indicators of UK economic activity: Value Added Tax returns article.

5 . Energy and housing indicators

Energy Performance Building Certificates

This indicator presents data on the number of Energy Performance Building Certificates (EPCs) lodged in England and Wales. An EPC is a requirement when a property is built, sold or rented in England and Wales. All new buildings and conversions of existing buildings must also obtain an EPC on completion. The EPC provides information on the energy efficiency of the property or conversion.

Data is sourced from the EPC register held by the Ministry of Housing, Communities and Local Government (MHCLG). In line with regulations, MHCLG cannot amend data once an EPC has been lodged.

Users should note EPCs are valid for 10 years and may be reused during this period. As a result, properties that are sold or let with a valid EPC will not generate a new record and will not appear in these data. Additionally, these data also include cancelled or "not for issue" certificates, so they may contain multiple records for a single Unique Property Reference Number where more than one EPC has been issued.

These administrative data are subject to continuing quality assurance and improvement. Differences may occur between these weekly estimates and daily or monthly EPC statistics published in MHCLG's Live tables on Energy Performance of Buildings Certificates because of differences in aggregation (for example overlapping weeks).

Further information on the data quality and methodology of these estimates is available in MHCLG's Energy Performance of Buildings Certificates quarterly statistics collection. Notes and definitions of all terms related to EPCs are available in MHCLG's Energy Performance of Buildings Certificates: notes and definitions guidance.

Renter affordability for new tenancies

These data are monthly estimates on rental affordability for new private tenancies, provided by Dataloft, a housing market economics consultancy. The dataset covers approximately 40% of the UK private rental market, based on Census 2021 estimates and assumptions of tenancy length.

The published estimates are an affordability ratio, calculated as the proportion of a tenant's income that is spent on rent. Increases in the ratio show reduced affordability and that tenants are spending a higher proportion of their income on rent. The affordability ratio is only calculated using new tenancies, comprising of approximately 30,000 new tenancy agreements and 50,000 new tenants each month.

Income is defined as adjusted gross income at the individual level, as reported by renters (rather than at the household level). The data excludes guarantors and tenants with reported annual incomes below £10,000 or above £500,000. Monthly data are published with a one-month lag.

These estimates are not directly comparable with our measures of Private rental affordability. This is because they are based on different data sources, coverage and methods, and may not be representative of the whole UK market.

Specifically, private rental affordability estimates include both new and existing tenancies, whereas our renter affordability includes new tenancies only. As such, users should exercise caution when interpreting trends, as our data represent point-in-time estimates.

Rightmove

These data are provided by Rightmove, an online property portal. They provide insights into activity in the UK housing market.

The dataset includes measures of activity in both the rental and sales markets. Data for the rental market include new property rental listings. Data for the sales market include new property sale listing and average time on the market. Data are available at weekly and monthly frequencies and can be broken down by UK country and English region.

The dataset excludes:

- new-build properties
- auction properties
- retirement properties
- shared ownership properties
- house shares
- student lets
- short-term lets
- build-to-rent properties
- properties with more than 10 bedrooms
- properties not classified as a flat or apartment, house, or bungalow

Users should note that the data are based on property listings, rather than unique properties. As a result, a single property may be represented more than once if it has multiple listings.

Further information is available from Rightmove's House Price Index and Rental Price Tracker.

System Average Price of gas

Data are collected from the Data Item Explorer from the National Grid. The daily System Average Price (SAP) determines the futures price and is therefore used to indicate supply constraints and demand pressures. For the Real-time indicators statistical bulletin, the actual day value (pence per kilowatt hour, p/kWh) and the seven-day rolling average (p/kWh) of these values are reported. These data are accessed weekly, in a Monday-to-Sunday format.

Data are recorded on a Sunday and published in the Real-time indicators bulletin the following Thursday. These data can be subject to extreme within-day trading prices, which can lead to skewing of actual traded prices. While these data reflect spot prices on the day, traders can opt for future contracts where the buyer and the seller agree the market-determined price for gas for a future date.

Other markets also exist for wholesale gas trading in Great Britain. Despite this, the scope of SAP is sufficient to provide a representation of supply constraints and demand pressures in the gas industry.

System price of electricity

Data for the system price of electricity are collected from the Elexon data portal. The system price of electricity is used to settle the difference between the contracted generation or consumption of electricity, and the actual amount of electricity that was generated or consumed. Where companies have generated more, or less, electricity than the quantity of electricity that customers consume, the difference is balanced by the National Grid Transmission System, which buys or sells electricity equal to the difference.

The system price of electricity reflects the cost incurred by the National Grid in this process. More information about the system price of electricity and how prices are calculated can be found on the Elexon website.

The system price of electricity is calculated at a half-hourly interval, which we average over a 24-hour period to calculate the daily average (pence per kilowatt hour, p/kWh). This is then averaged over a shifting seven-day period, to calculate the seven-day rolling average (p/kWh). Data are recorded on a Sunday and are published in the Real-time indicators bulletin the following Thursday. Prices may change after initial reporting because of a submission, or resubmission, of data by the National Grid.

Additionally, the fluctuations in electricity prices presented here do not directly affect consumer bills. This is because the Office of Gas and Electricity Markets (Ofgem) takes wholesale price into consideration when determining the cost of energy. Ofgem publishes the official UK wholesale price on a monthly basis, which is available on the Ofgem website.

6 . Transport indicators

Shipping indicators

Our weekly real-time shipping indicators detail the estimated shipping activity across the UK at several major ports. Ships are recorded entering one of the monitored ports, and are classified as either a "cargo and tanker ship" or "other". These values are summed for each port, and as a total across the UK. More quality and methodology information is available in Faster indicators of UK economic activity: more timely and relevant shipping indicators.

Users should note that there was a comprehensive overhaul of our data collection and processing systems, resulting in a level shift across the entire data time series when the data were re-released in November 2023. While the overarching trends seen in the dataset have largely remained consistent with previous releases, we strongly advise against drawing direct comparisons between data from releases after November 2023 and before June 2023.

UK flight data

These data are daily flight figures from the European Organisation for the Safety of Air Navigation (EUROCONTROL). Daily flight numbers for the UK alongside other countries are available in EUROCONTROL's dashboard. EUROCONTROL is a pan-European, civil-military organisation dedicated to supporting European aviation. Its Aviation Intelligence and Performance Review Unit provides independent collection and validation of air navigation services performance-related data and intelligence gathering.

The flights data include international arrivals and departures to and from the UK (including Crown dependencies) and domestic UK flights but excludes overflights (flights that pass over UK territory). They capture all flight movements that operate under Instrument Flight Rules (IFR), where the pilot uses instruments in the flight deck to control, guide and adjust the plane. This includes commercial flights carrying passengers and cargo, as well as non-commercial flights such as private and military flights.

Data from EUROCONTROL do not include information on the volume of passengers or cargo carried on UK flights. Especially in the context of the coronavirus (COVID-19) pandemic, flights might not be operating at full capacity and therefore trends in passengers and cargo will differ from trends in flights presented here.

Vehicle registration and production

Monthly new vehicle registration and vehicle production data are provided to us by The Society of Motor Manufacturers and Traders (SMMT), a large trade association that represents the UK automotive industry.

The registrations data are a count of vehicles newly registered with the Driver and Vehicle Licensing Association. All cars and light commercial vehicles up to 3.5 tonnes are included. The data do not include motorbikes, agricultural vehicles, heavy goods vehicles, buses or coaches.

The data are available by sales type and fuel type.

Sales type definitions:

- Private – a motor vehicle registered to an individual
- Fleet – a motor vehicle registered to a business with 25 or more registered vehicles.
- Business – a motor vehicle registered to a business with fewer than 25 registered vehicles.

Fuel type definitions:

- Petrol Vehicle: Any vehicle propelled solely by an internal combustion engine running on petroleum, including Mild Hybrid Electric Vehicles.
- Diesel Vehicle: Any vehicle propelled solely by an internal combustion engine running on diesel, including Mild Hybrid Electric Vehicles.
- Battery Electric Vehicle (BEV): Vehicles driven solely by an electric motor powered by a battery, commonly known as fully electric.
- Plug-in Hybrid Electric Vehicle (PHEV): Vehicles driven by a combination of an internal combustion engine (petrol or diesel) as well as an electric motor, with a battery that can be charged by connecting to an external power source.
- Hybrid Electric Vehicle (HEV): Vehicles driven by a combination of an internal combustion engine (petrol or diesel) as well as an electric motor with a small battery that is charged by the engine and regenerative braking. Known commonly as self-charging Hybrids.

SMMT compile monthly estimates of the number of cars and commercial vehicles produced in the UK from their survey of vehicle manufacturers. The survey is completed by all vehicle manufacturers in the UK except some very small, specialist vehicle producers.

The estimates are split by the number of cars produced and the number of commercial vehicles. Commercial vehicles include vans, heavy goods vehicles, buses and coaches.

Further data are available on the SMMT website UK Vehicle Data | Automotive Industry Data and Statistics | SMMT

7 . Data quality

Official statistics in development

Our indicators are labelled as official statistics in development. Until September 2023, these were called "experimental statistics". Read more about the change in our Guide to official statistics in development.

We are developing how we collect and produce the data to improve the quality of these statistics.

Dataset frequency

The publication frequency of our associated data is updated in our weekly Economic activity and social change in the UK, real-time indicators bulletin. Please note, there may be some changes to the intended release frequency of some indicators for a variety of reasons, such as data availability. As of June 2025, our intended release frequencies are as follows.

Weekly

- Revolut spending on debit cards
- automotive fuel spending
- company incorporations, voluntary dissolutions and compulsory dissolutions
- advanced notification of potential redundancies
- System Average Price of gas dataset
- system price of electricity dataset
- Energy Performance Building Certificates (EPC)
- weekly shipping indicators
- daily UK flights

Monthly

- Direct Debit failure rate and average transaction amount
- Textkernel new online job adverts
- Value Added Tax (VAT) flash estimates
- renter affordability for new tenancies

Quarterly data release

- sales and jobs in small businesses dataset

Strengths and limitations

Each Real-time indicator has been produced to provide timely indicators of the effect of developing world events on the UK economy and society. We use close-to-real-time big data, administrative data sources, rapid response surveys, or official statistics in development. All data are reviewed and refreshed on a regular basis, with indicators swapped in and out of the publication, based on suitability and availability.

Seasonality

Seasonal fluctuations are likely to be present in many of these indicators, so caution must be applied when interpreting changes in series that are not seasonally adjusted. Many of our indicators have been seasonally adjusted to remove these fluctuations.

For more information on seasonal variation, and how we implement seasonal adjustment, see our Economic activity and social change in the UK, real-time indicators technical article.

8 . Glossary

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.

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 most 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 most units are occupied by high street non-food retailers.

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.

New live online job advertisements

The total number of adverts that appear online for the first time in the calendar month.

Small businesses

Defined by Xero as organisations with fewer than 20 employees.

Non-seasonally adjusted (NSA)

Data have not been transformed and systematic variation in time series associated with the time of year may be present.

Seasonal adjustment is the identification and removal of consistent and systematic variation in time series associated with the time of year.

Seasonally adjusted (SA)

Seasonal adjustment is the identification and removal of consistent and systematic variation in time series associated with the time of year.

9 . Related links

Economic activity and social change in the UK, real-time indicators: seasonal adjustment article
Methodology | Released 25 June 2025
Methodology for the seasonal adjustment of real-time indicators.

Economic activity and social change in the UK, real-time indicators
Bulletin | Released weekly
Early data and analysis for UK economy and society. Includes activity and change in business, spending, travel and jobs using rapid-response surveys, novel data sources and methods.

Business insights and impact on the UK economy
Bulletin | Released fortnightly
The impact of challenges facing the economy and other events on UK businesses. Based on responses from the voluntary fortnightly business survey (BICS) to deliver real-time information and help assess issues affecting UK businesses and economy, including financial performance, workforce, trade, and business resilience.

Public opinions and social trends, Great Britain
Bulletin | Released fortnightly
Social insights on daily life and events, including impacts on health and well-being, the cost of living, and goods shortages from the Opinions and Lifestyle Survey (OPN).

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 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 indices and new VAT reporters. These are data created as part of the latest indicators release.

10 . Cite this methodology

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