Office for
National Statistics

Business Insights and Conditions Survey (BICS) QMI

Quality and Methodology Information for the Business Insights and Conditions Survey, detailing the strengths and limitations of the data, methods used and data uses and users.

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To be announced

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1 . Output information

Survey name	Business Insights and Conditions Survey
Frequency	Fortnightly
How compiled	Inter-Departmental Register (IDBR) from Wave 7 onwards
Geographic coverage	United Kingdom
Sample size	Approx. 39,000
Last revised	20 May 2021

2 . About this Quality and Methodology Information report

This quality and methodology report contains information on the quality characteristics of the data (including the European Statistical System five dimensions of quality) as well as the methods used to create it.

The information in this report will help you to:

- understand the strengths and limitations of the data

- learn about existing uses and users of the data

- understand the methods used to create the data

- decide suitable uses for the data

- reduce the risk of misusing data

3 . Important points

- The Business Insights and Conditions Survey (BICS) presents fortnightly statistics on the business impacts of important events such as the coronavirus (COVID-19) pandemic and the end of the EU transition period.

- Survey questions primarily cover impacts on financial performance, workforce, prices, trade and business resilience.

- The survey is voluntary and the results are experimental.

- The survey questions are reviewed fortnightly to reflect important topics as events unfold. New questions are added and refined over time to keep analysis relevant.

- Based on user feedback, from Wave 24, the survey name changed from the "Business Impact of Coronavirus (COVID-19) Survey" to the "Business Insights and Conditions Survey" (BICS). Its purpose remains the same, to collect timely information on important issues such as the coronavirus pandemic and the end of the EU transition period.

- Estimates from the Business Insights and Conditions Survey (BICS) are published every fortnight. From Wave 7 onwards the national estimates are weighted, while the regional estimates are unweighted.

- To help understand the local business impacts from coronavirus lockdowns and restrictions. From Wave 14 (September 2020), weighted estimates for only "single site" businesses are published every two months.

4 . Quality summary

Overview

The Business Insights and Conditions Survey (BICS) collects timely information on important issues such as the coronavirus (COVID-19) pandemic and other rapidly changing circumstances affecting UK businesses. Data are collected via a fortnightly online questionnaire from a sample of approximately 39,000 businesses, capturing businesses' experiences on financial performance, workforce, prices, trade, and business resilience. Respondents are asked for their experiences at time of answering or over the two weeks (reference period) before the collection period begins. Survey questions are often added, removed or amended to reflect changing circumstances and analytical priorities.

The BICS sample size has increased over time to allow for deeper and better insights. In summer 2020, the sample design was reviewed and refreshed for Wave 7 of BICS, which went live on Monday 15 June 2020. The questionnaire was sent to approximately 24,000 businesses from Wave 7 onwards, up from approximately 17,000 prior to this change. This sample redesign improved our coverage of the smaller sized businesses, allowing us to develop weighted BICS estimates that would make comparison across waves appropriate.

The fortnightly estimates from BICS are weighted from Wave 7 onwards, with only regional tables unweighted. A detailed description of the weighting methodology and its differences to unweighted results can be found in the Business Impact of Coronavirus (COVID-19) Survey: preliminary weighted results.

In Autumn 2020, as local coronavirus lockdowns became more common, there was a growing need from users to understand how coronavirus impacts differed by local area. Therefore, the BICS sample was reviewed and refreshed once again to improve coverage across local areas in the UK. The sample increased from approximately 24,000 to 39,000 in Wave 17. This allowed us to develop weighted subnational BICS estimates for single sites within our Understanding the business impacts of local and national restrictions release.

BICS results are made publicly available in Excel format and are accompanied by a statistical bulletin. BICS also makes available its micro-data through the Secure Research Service (SRS) and UK data service (UKDS) where academics and accredited institutions can work on the BICS data from all the waves. The microdata have been processed to ensure no specific business can be identified.

Uses and users

A number of government departments and other bodies use BICS' data to inform crucial policy decision making throughout the pandemic, analyse changing economic trends and identify sectoral differences in impacts from key events affecting UK businesses.

 Key users include:

- Cabinet Office

- The Devolved Administrations

- Department for Business, Energy and Industrial Strategy (BEIS)

- Department for International Trade (DIT)

- Department for Digital, Culture, Media and Sport (DCMS)

- HM Treasury

- Business and Marketing analysts

- Bank of England

Strengths and limitations

The main strengths of the survey include:

- it provides a rapid production of final data: the online platform currently collects data fortnightly, with estimates and reference tables published on the ONS website within four days of survey completion

- it is flexible and responsive to changing events: the BICS questionnaire process allows for questions to be added, amended or removed from one wave to another

- it meets data needs: the questionnaire is developed with regular customer consultation and design expertise is applied in the development stages

- its questions are kept as straightforward as possible and directed at the majority of the business population; however, it is also possible to include questions only relevant for specific sub-samples

- robust methods are adopted for the survey's sampling and weighting strategies to limit the impact of bias (for example, non-responding and non-sampled biases)

- it is accurate and reliable; the questionnaire is rigorously tested, and the data is quality assured

The main limitations of the survey include:

- Data is currently published in waves and not as a time series (although it is available for key variables such as trading status)

- These data are not [official statistics](#) but have been developed to deliver timely indicators to help understand the impact of the coronavirus pandemic and the end of the EU transition period

- The unweighted estimates should be treated with caution because they represent the characteristics of only those businesses that responded and not necessarily the wider business population; therefore comparisons between waves cannot be made for Waves 1 to 6.

- The survey is voluntary and so response rates are lower than for most other ONS business surveys (which are usually mandatory). The low response provides good high level estimates but means more detailed breakdowns might not always be possible.

Recent improvements

There have been five important recent improvements to note:

- All industry and size band results are weighted which allows comparisons between waves, as any imbalances caused by non-responding and non-sampled businesses are corrected; this means that weighted estimates in every wave represent the experiences of all UK businesses rather than just those that have responded.

- Weighted subnational BICS estimates are available for "single site" businesses to help [understand the business impacts of local and national restrictions](#); these estimates are available from Wave 14 (September 2020) onwards and are currently produced after every five waves or so.

- The structure of the BICS publication was updated in Wave 24; the statistical bulletins are now shorter, with greater emphasis on the main business impacts and headline trends.

- The survey name changed in Wave 24 from the Business Impact of Coronavirus (COVID-19) survey to the Business Insights and Conditions Survey.

- From Wave 28, time series data for the main variables has been introduced into our dataset to enable wave comparisons.

5 . Quality characteristics of the Business Insights and Conditions data

Relevance

(The degree to which the survey meets users' needs.)

The survey is currently a fortnightly survey of UK businesses with a focus on collecting timely information on the coronavirus (COVID-19) pandemic and other rapidly changing circumstances. Questions are often requested by government departments and by other internal ONS departments.

The Business Insights and Conditions Survey (BICS) provides rapid answers to questions of immediate policy interest, helping to measure key economic impacts on businesses. Topics that have been requested include financial performance, workforce, prices, trade, and business resilience.

Accuracy and reliability

(The degree of closeness between an estimate and the true value.)

The survey measurement will differ from the unknown true value for a number of reasons. The difference is technically known as the statistical error. The total error in a survey estimate is made up of two components: sampling error and non-sampling error.

Sampling error

The BICS is a sample survey, so estimates are subject to sampling variability. Sampling variability is dependent on several factors, including:

- the size of the sample

- the effects of the sample design

- the effects of weighting

To minimise the effect of sampling error the survey has a large sample size, a standard and robust design, and the weighting is appropriate.

Non-sampling error

Sources of non-sampling error include the following:

- imperfections of the sampling frame (the IDBR)

- non-response

- response errors (caused by, for example, misleading questions or interviewer bias)

- errors when imputing or processing data

To minimise the effect of non-sampling error, the questionnaire is carefully designed and quality control procedures are used throughout. Weighting or imputation are used appropriately to compensate for non-response. Imperfections in the IDBR are minimised by applying robust and long-established maintenance and updating procedures.

Standard errors are currently being developed for BICS and will be included when available.

Coherence and comparability

(Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain, for example, geographic level.)

The estimates in the Business insights and impacts on the UK are based on a single source; the Business Insights and Conditions Survey (BICS). This has allowed comparisons over time for key questions on trading status, workforce status, financial performance and business resilience. Key BICS estimates on financial performance and furlough have been shown to be coherent with official estimates. Surveys such as construction and retail sales use our data for quality assurance purposes and include content within their publications.

We often compare BICS' financial performance trends with monthly GDP in our main release and have also made Comparison of furloughed jobs data (comparing how official HMRC estimates compare well with timelier BICS estimates). Other official sources have often reinforced, at a later date, emerging stories initially picked up in BICS estimates. We cite these in our main release where possible.

Overall, key BICS estimates on financial performance and furlough have been shown to be coherent to official estimates, despite being timelier.

Accessibility and clarity

(Accessibility is the ease with which users can access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the release details, illustrations and accompanying advice.)

Each wave, datasets in Excel format are produced alongside the statistical bulletin. Each workbook contains several different tabs which are clearly labelled and provide data and information collected for that specific wave, broken down by industry and size band. As questions vary every wave, we include a link to the latest questions for the current live wave and a link to previous waves questions on the Office for National Statistics (ONS)website.

Anonymised BICS data are sent to the ONS' Secure Research Service (SRS) and UK data service (UKDS) to allow users access to the microdata. BICS data are added on a fortnightly basis, with an approximate three-week lag between the initial BICS publication and the data being made available on the SRS and UKDS. The microdata are processed to ensure that no specific business can be identified.

To conduct analysis with microdata from the SRS, a project application must be submitted to the Research Accreditation Panel (RAP). To access the SRS, you must also work for an organisation with an Assured Organisational Connectivity agreement in place.

Timeliness and punctuality

(Timeliness refers to the lapse of time between data collection and data delivery. Punctuality refers to the gap between planned and actual data delivery dates.)

The BICS collects data every day via its online questionnaire, with every two-week period having a set group of questions referred to as a wave. Results from each wave are published just four days after the survey closes, and accompanying analysis is also provided. The publication and dataset are published every other Thursday on the ONS website (three days after the survey end date) and have all been delivered on time and to standard.

Concepts and definitions (including list of changes to definitions)

(Concepts and definitions describe the legislation governing the output, and a description of the classifications used in the output.)

Coronavirus

Coronaviruses are a family of viruses that cause disease in people and animals. They can cause the common cold or more severe diseases, such as COVID-19.

COVID-19

COVID-19 is the name used to refer to the disease caused by the SARS CoV-2 virus, which is a type of coronavirus. The Office for National Statistics (ONS) takes COVID-19 to mean presence of SARS-CoV-2 with or without symptoms.

Furlough

Furlough is a temporary absence from work allowing workers to keep their job while the coronavirus (COVID-19) pandemic continues.

Reporting unit

The business unit to which questionnaires are sent is called the reporting unit. The response from the reporting unit can cover the enterprise as a whole or parts of the enterprise identified by lists of local units.

Single site

Single site businesses can have just one site or many sites, and these sites can be in one country or region or have a presence across the UK and beyond. By using a single business site approach, we exclude businesses with multiple sites. Overall, single site businesses represent 98% of all businesses, and approximately half of total UK turnover and employment.

Why you can trust our data

The ONS is the UK's largest independent producer of statistics and its National Statistics Institute. The Data Policies and Information Charter, available on the ONS website, details how data are collected, secured and used in the publication of statistics. We treat the data that we hold with respect, keeping it secure and confidential, and we use statistical methods that are professional, ethical and transparent. You can find out more about our data policies on our website.

6 . Methods used to produce the Business Insights and Conditions (BICS) data

Sampling frame

The sample was redesigned at Wave 7 incorporating the following features:

- improved sampling of smaller-sized businesses

- sample selected independently of other Office for National Statistics (ONS) surveys

- businesses joining, staying in, and leaving the sample being managed in a robust and consistent way

- a significantly increased sample size from approximately 17,000 to 24,000 UK businesses

These improvements to our design provided a suitable foundation for weighting to be applied to the, until then, unweighted estimates. (The sampling frame used in the Business Insights and Conditions survey (BICS) for the first 6 waves was a sub-sample of the listed industries from the monthly business survey (MBS), and the design was difficult to weight appropriately.)

In Wave 17 the sample size was increased once again to approximately 39,000 businesses, further improving the accuracy across regions and different businesses sizes.

All businesses with an employment of greater than 250 employees are included in the BICS sample with a random sample for those with an employment between 0 and 249.

Coverage

The industries covered are:

- non-financial services (includes professional, scientific, communication, administrative, transport, accommodation and food, private health and education, and entertainment services)

- distribution (includes retail, wholesale and motor trades)

- production (includes manufacturing, oil and gas extraction, energy generation and supply, and water and waste management)

- construction (includes civil engineering, housebuilding, property development and specialised construction trades such as plumbers, electricians and plasterers)

The following industries are excluded from the survey:

- agriculture

- public administration and defence

- public provision of education and health

- finance and insurance

Reporting unit

The business unit to which questionnaires are sent is called the reporting unit. The response from the reporting unit can cover the enterprise as a whole or parts of the enterprise identified by lists of local units. Other than for a minority of larger business or businesses that have a more complex structure, the reporting unit is the same as the enterprise.

Where more than one type of economic activity is carried out by a local unit or enterprise, its principal activity is the activity in which most of the people are employed, and it does not necessarily account for 50% or more of the total employment of the unit. There are detailed rules for determining [Standard Industrial Classification (SIC)](#) for multiple-activity economic units.

End of the EU transition period

As the shape of the UK's future statistical relationship with the EU becomes clearer over the coming period, we are making preparations to assume responsibilities that as part of our membership of the EU, and during the transition period, were delegated to the statistical office of the EU, Eurostat. This includes responsibilities relating to international comparability of economic statistics, deciding what international statistical guidance to apply in the UK context and to provide further scrutiny of our statistics and sector classification decisions.

How we process the data

The data is validated and cleaned, variables are derived, and weights are applied. As the survey collects information on a sample of the population, the data is weighted to enable us to make inferences from this sample to the entire population.

Businesses only answer questions dependent on previous responses because of routing. As such, weighting is done per question and can mean some variables have low response.

Weighting

Weighted estimates for the BICS are used for all variables that are collected at a UK level. A detailed description of the weighting methodology and its differences to unweighted estimates is available in [Business Impact of Coronavirus (COVID-19) Survey (BICS): preliminary weighted results.](#)

On 1 February 2021, experimental weighted regional estimates up to Wave 21 (28 December 2020 to 10 January 2021) were published in [Understanding the business impacts of local and national restrictions: February 2021](#), as part of the Economic Review.

[Weighted estimates for Scotland for businesses with more than nine employees](#) are available from the Scottish Government.

Different weighting methods are appropriate depending on the type of analysis and policy questions being considered. Table 4 in the [Business Impact of Coronavirus (COVID-19) Survey: preliminary weighted results](#) article highlights which weights we aim to publish for each table.

Weighting by count

Weighting by count scales up responses in BICS to be representative of all businesses in the UK. It scales up responses for all businesses that have between 0 and 249 employees, to the point where the counts of all businesses of this size in the UK are represented. The size band of greater than 250 employees is completely enumerated, so no weighting is applied.

The weight applied to each response in qualitative questions (for example, on trading status) is based on standard expansion estimation. The weights are calculated for each stratum, that is, a group of businesses with the same characteristics based on Standard Industrial Classification (SIC) 2007 industry, employment size and country. In each stratum the weight is the ratio of two counts of businesses. The numerator is the count of all businesses in the UK in that stratum; the denominator is the count of businesses responding to the survey.

Of the three weighting methods used, weighting by count results in the largest differences to the unweighted BICS results (for example, the proportion of businesses that are currently trading); this is mainly because the weights of small businesses are larger. Responses from businesses with zero to nine employees are weighted the most, given that they make up 90% of the total number of businesses in the UK but only around 10% of respondents in BICS.

Weighting by count provides a good overview of the impact of businesses regardless of their size, allowing for the experience of small businesses to be better represented in headline results (this is particularly important for responses such as "currently paused trading" where small businesses tend to dominate).

Weighting by ratio estimation with turnover as the auxiliary variable

The value of turnover is derived using the percentage questions asked on the BICS and registered turnover in the Inter-Departmental Business Register (IDBR), which is used to construct the BICS sampling frame. In effect, businesses with larger turnover are given greater emphasis in results. Once the value of the turnover of responding businesses is derived, a standard ratio estimation with IDBR turnover as the auxiliary is then used to calculate the weight applied to a particular stratum. Ratio estimation corrects for any imbalances in the selected sample that arise through random chance or non-response.

Of the three weighting methods used, this method results in very small differences to unweighted BICS results. This is because medium to large businesses account for most of the turnover in the economy, and their weights are close to one.

Weighting by ratio estimation with employment as the auxiliary variable

We first derive counts of employment from the percentage questions asked on the survey (such as on percentage of staff furloughed) and multiply these percentages by the registered employment figure recorded in the IDBR at the time of the sample selection. In effect, the percentages reported by businesses with larger employment sizes are given greater emphasis in the results. These counts are then weighted using standard ratio estimation with IDBR employment as the auxiliary variable. By using employment as the auxiliary variable, ratio estimation corrects for any imbalances in the selected sample that arise through random chance or non-response.

Of the three weighting methods used, this method results in very small differences compared with the unweighted BICS results. This is because medium to large business accounts for most of the employment in the economy with weights that are close to one.

Imputation

Imputation is only applied to the larger businesses (those with more than 250 employees) as all these businesses in this population are sampled, and the use of imputation based on their response characteristics from earlier waves where available is more precise than using weighting to compensate for non-response.

Unweighted regional estimates

Unweighted regional BICS estimates are produced by taking the survey return from each reporting unit and then applying this to the reporting unit's local sites. If a business has a site or several sites (also known as local units) within a country, using information from the Inter-Departmental Business Register (IDBR), then this business is defined to have presence there. The business is then allocated once within each region (regardless of the number of sites) and the information provided by the reporting unit as a whole is copied and used within each country.

How we quality assure and validate the data

There are quality assurance processes from the drawing of the sample and development of the questionnaire to publication of the data and estimates.

These processes include:

- the accuracy of businesses in the sample is validated

- post collection, a series of checks are conducted on the data to identify inconsistencies and invalid responses

- estimates checked at multiple stages between analysis and final reference tables and publication

- curiosity events are conducted to investigate and validate movements

- the application of statistical disclosure control; suppressing estimates to avoid any disclosure of personal information

How we disseminate the data

The ONS currently produces a fortnightly bulletin capturing businesses' views on financial performance, workforce, prices, trade, and business resilience. This includes a set of reference tables providing further data than given in the bulletin. In addition:

- Weekly slides are provided to Cabinet Office (CO) and other government departments

- Ad hoc requests are also delivered to both external and internal users and added to the dataset which can also be found in the ad hoc area on the ONS website.

- Anonymised data are sent to ONS' Secure Research Service (SRS) and the UK data Service on a fortnightly basis.