

# Business demography QMI

Quality and methodology information for UK business demography, detailing the strengths and limitations of the data, methods used, and data uses and users.

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# 1 . Output information

- National Statistic: Yes
- Survey name: Business demography
- Data collection: Administrative data
- Frequency: Annual
- Geographic coverage: UK
- Related publications: UK business activity: activity, size and location
- Last revised: 17 November 2022

## 2 . About this Quality and Methodology Information report

This quality and methodology report contain 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
- help you to decide suitable uses for the data
- reduce the risk of misusing data

## 3 . Important points

- Business demography is produced from the Inter-Departmental Business Register (IDBR), which is sourced mainly from administrative data.
- Business demography is an annual publication based on the number of businesses registered for Value Added Tax (VAT) and/or Pay As You Earn (PAYE).
- The publication breaks the data down into the number of business births and deaths in the reference year; it also tracks the five-year survival rates of new businesses.
- The data in the publication are broken down by geography and Standard Industrial Classification (SIC).

## 4 . Quality summary

[Business demography](#) is an annual publication produced from the Inter-Departmental Business Register (IDBR). The publication focuses on changes to the registered business population, that is, those businesses registered at HM Revenue and Customs (HMRC) for Value Added Tax (VAT) and/or Pay As You Earn (PAYE) and at Companies House.

Unlike the [UK business: activity, size and location publication](#), which is a snapshot of a point in time on the IDBR, Business demography measures businesses that were active throughout the reference year. The reference period is December, and therefore the 2021 publication measures businesses that were active between December 2020 and December 2021. Being active means that the business had either turnover or employment at any time during the reference year. The file of active businesses is compared with previous and subsequent files in order to identify business births and deaths and up to five-year survival rates.

The data have been produced in response to a European Union regulation, and there are comparable data across European Union members. These data are a useful indicator of entrepreneurship and economic growth.

The data tables in the publication are broken down by [UK Standard Industrial Classification 2007 \(SIC 2007\)](#) and by geography down to local authority or district level.

### Uses and users

The data in the publication are used extensively by central and local government, MPs and private sector users for a range of investigative, monitoring and planning purposes. The data are also used by academia and regularly by the media who consider this information to be an indicator on economic activities. The product is generally used by those who wish to examine the numbers of business births and deaths and business survival rates in certain industries and/or geographical areas.

Specific uses of this product and the views of users can be seen in the UK Statistics Authority assessment report number 187: [Statistics on UK Business Population and Demography](#).

## Strengths and limitations

The main administrative sources for the IDBR are VAT trader and PAYE employer information. These are passed to the Office for National Statistics (ONS) by HMRC under the Value Added Tax Act 1994 for VAT traders and the Finance Act 1969 for PAYE employers; details of incorporated businesses are also passed to the ONS by Companies House. ONS survey data and survey information from the Northern Ireland Statistics and Research Agency (NISRA) and the Department for Environment, Food and Rural Affairs (DEFRA) farms register provide auxiliary information.

These comprehensive administrative sources combined with the survey data contribute to the coverage on the IDBR, which is one of its main strengths.

The IDBR provides comprehensive coverage of businesses registered for VAT and/or PAYE, but there exists a sizeable population of low turnover non-employing businesses that the IDBR does not include. These businesses are not included in the publication. It is currently estimated that in the UK, there are 2.9 million registered businesses and 2.8 million unregistered businesses. The unregistered businesses are very small in terms of turnover, and the vast majority of UK economic activity is captured through the 2.9 million registered businesses that are on the IDBR.

The Department for Business, Energy and Industrial Strategy (BEIS) produces a publication called [Business Population Estimates](#), which provides an estimate of the total UK business population. (It includes an estimate of the "unregistered" population.) Further information on the three [National Statistics](#) publications that provide information on the UK business population can be found in the Coherence and comparability subsection.

It is worth noting some limitations of measures of business births and deaths as signs of health of the economy. First, business demography only captures one dimension of change in the economy: incumbent firms that grow or shrink in size are not captured in these numbers. Neither do these statistics make a distinction on the size of the businesses involved, such that the birth or death of a sole trader and a company employing dozens of workers are treated equally. Third, the IDBR is an administrative dataset, and the definition of an enterprise in it may not always correspond to the intuitive understanding of what a business is. For this reason, this publication also contains information on employer demography, and ONS also publishes other business demography breakdowns. Finally, for the process of 'creative destruction' to take place, we want to know that closing businesses are replaced by more productive ones. The IDBR does not allow for productivity estimates, so it is important to look at the numbers in this publication in the context of other ONS publications that do.

To support the release, we have produced [a set of datasets in greater geographical and industrial detail](#). We recommend treating the data with caution when it is broken down to a lower geographical level. In recent years, multiple registrations at a single postcode have caused large fluctuations in the data. An explainer, [Multiple business registrations at a single postcode](#) has been produced regarding this issue.

## Recent improvements

The Business demography publication reference period records the number of active businesses over a period of a year. Up to 2016, this was measured from a single point in November in one year to a single point in November in the following year. For example, the 2015 publication measured the number of active businesses taken from a specific date in November 2014 to the same date in November 2015. From 2016 onwards, the reference period moved to December. This has helped bring the reference period closer to the calendar year, as recommended by the [joint Eurostat and Organisation for Economic Co-operation and Development \(OECD\) manual on business demography](#).

The Grimsby VAT office deals with the liable no longer liable (LNLL) type of registrations. These registrations carry the address of the Grimsby VAT office and influence the data for the North East Lincolnshire unitary authority. Analysis was previously published to show [the effect of the Grimsby VAT office on business survival rates in North East Lincolnshire](#). After obtaining further information from HMRC, a decision was made to remove the businesses holding the Grimsby VAT office address. In the 2017 publication, all data have been revised back to 2012 to reflect this change.

One of the main sources of data on the Inter-Departmental Business Register (IDBR) is the Value Added Tax (VAT) data received from HM Revenue and Customs (HMRC.) In September 2016 HMRC introduced a [new tax law](#). This law instructs all overseas sellers, who sell to the UK, via the internet, to register for VAT. If the overseas seller does not have a UK tax representative, HMRC can register the company for VAT using the address of the Aberdeen VAT office. Following the introduction of this law there was a large increase in the births and deaths recorded at this VAT office and so in our 2018 publication we identified these and excluded them from our data. Identifying overseas sellers, when they are recorded at the address of an accountant or management company, is much more difficult. While working on this release we identified a number of businesses recorded at the addresses of accountants and management companies that, after investigation, have proven to be overseas online sellers. As part of our policy to continually improve the quality of our data for users, we have excluded such businesses from the 2017, 2018 and 2019 data so that users have a continuous time series.

An improvement has been made to the data shown in this publication. For all of the years covered in this release (2016 to 2021), businesses that have neither VAT nor PAYE but do have a live company number have been removed from the figures. They have been removed because they may misrepresent business birth and death figures.

We create these enterprises on the Inter-Departmental Business Register (IDBR) in order to monitor them, usually because they help to give the full picture on the enterprise group. Often these businesses do not have employment or turnover, but have some role in the enterprise group, perhaps as the parent of the group. The vast majority of our business surveys exclude these cases, but they have been included in both annual and quarterly demography results until now.

These businesses will also be removed from the next set of quarterly business demography results, which are due to be released towards the end of January 2023. The next quarterly business demography release will also include commentary on the differences in business births and deaths between the annual figures and the quarterly figures.

## 5 . Quality characteristics of the Business demography data

This section describes the quality characteristics of the data and identifies issues that should be noted when using the output.

### Accuracy and reliability

The publication is an extract from the Inter-Departmental Business Register (IDBR), which is based on administrative records; there is no estimation or imputation. However, it is important to note that underlying the extracts are IDBR processing rules, which impact, for example, on the timeliness and classification of businesses.

A more detailed explainer on the [IDBR sources, structure and updating \(PDF, 60KB\)](#) process is available.

### Coherence and comparability

There are three National Statistics publications that provide information on the UK business population:

- the Department for Business, Energy and Industrial Strategy (BEIS) Business Population Estimates publication provides the only estimate of the total UK business population (this publication includes an estimate of the "unregistered" population)
- the Office for National Statistics (ONS) UK business; activity, size and location publication provides more detail on the registered section of the business population
- the ONS Business demography publication includes levels of business births and deaths and provides an alternative measure of the registered business population

In addition to these publications, similar related National Statistics are released by the three devolved administrations for their countries, the Insolvency Service publishes National Statistics for corporate and individual insolvency, and Companies House publishes statistics based on activity on their register. The following summary describes the important features of the three UK business population publications.

## **Summary of three UK business population publications**

### **BEIS Business population estimates**

- Measure: population at start of calendar year (1 January), together with their associated employment and turnover.
- Coverage: VAT and/or PAYE- registered businesses plus estimate of unregistered population.
- Data source: InterDepartmental Business Register, ONS Labour Force Survey and HM Revenue and Customs selfassessment tax data.
- Timeliness: released about 10 months after reference point (data for January published in October).
- Geography: Data available at UK level, with country and regional breakdowns.
- Legal status: with exception of whole economy table, focus is on private sector companies: public corporations, sole proprietorships and partnerships.
- Industry: data available at Standard Industrial Classification (SIC) 2007 three-digit level.
- Other disaggregations: employee size band.
- Exclusions: public administration, private households and extraterritorial businesses; composite management service companies were excluded between 2004 and 2017.

### **ONS UK business: activity, size and location**

- Measure: population in March of each year.
- Coverage: VAT and/or PAYE- registered businesses and local units.
- Data source: InterDepartmental Business Register.
- Timeliness: released about seven months after reference point (data for March published in September or October).
- Geography: data available at UK level, down to local authority district or unitary authority in addition to Parliamentary constituency.
- Legal status: company, public sector, non-profit, partnership and sole proprietors.
- Industry: data available at SIC 2007 four-digit level.
- Other disaggregations: turnover and employment size band.
- Exclusions: Composite management service companies were excluded between 2004 and 2017.

### **ONS Business demography**

- Measure: business births, deaths and population "active" at any point within the year.
- Coverage: VAT and/or PAYE-registered businesses.
- Data source: InterDepartmental Business Register.
- Timeliness: Released about 11 months after reference period (for example, data for 2021 published in November 2022).
- Geography: data available at UK level, down to local authority district or unitary authority.
- Legal status: company, public corporations, non-profit, partnership, and sole proprietors.
- Industry: data available at SIC 2007 three-digit level.
- Other disaggregations: turnover and employment size band.
- Exclusions: agriculture and public administration; composite management service companies were excluded between 2004 and 2016.

## Accessibility and clarity

Our recommended format for accessible content is a combination of HTML webpages for narrative, charts and graphs, with data being provided in usable formats such as CSV and Excel. Our website also offers users the option to download the narrative in PDF format. In some instances, other software may be used or may be available on request. Available formats for content published on our website but not produced by us, or referenced on our website but stored elsewhere, may vary. For further information, please refer to the contact details at the beginning of this report.

The Business demography publication started in 2009. The publications are available from 2011 on the current [ONS website and between 2009 and 2010 on the ONS archive website](#).

Please note that the 2009 publication contains data back to 2004.

In addition, we publish [user-requested data](#) on our website. If the information you need has not previously been published, please contact us with the details of your requirements. Bespoke requests may be [chargeable](#) (updated link). If you would like further details, please contact [ibrdas@ons.gov.uk](mailto:ibrdas@ons.gov.uk).

For information regarding conditions of access to data, please refer to the following links:

- [terms and conditions \(for data on the website\)](#)
- [copyright and reuse of published data](#)
- [accessibility](#)
- [access to microdata via the Secure Research Service](#)

## Timeliness and punctuality

The Business demography reference period is December, and the publication is released the following November. This translates into a time lag of approximately 11 months.

For more details on related releases, the [GOV.UK release calendar](#) provides 12-months' advanced notice of release dates. If there are any changes to the pre-announced release schedule, public attention will be drawn to the change and the reasons for the change will be explained fully at the same time, as set out in the [Code of Practice for Statistics](#).

## Concepts and definitions

The Business demography data have been produced in line with a European Union regulation, the SBS recast Regulation 295/2008, which specifies the need for the annual collection of these data. The methodology and definitions used to create the data can be found in the [joint Eurostat and Organisation for Economic Co-operation and Development \(OECD\) manual on business demography](#).

## Geography

Regional analyses are provided for VAT- and/or PAYE-based businesses. The location of the business is generally the main operating site or the head office.

The geographies presented in the publication for England and Wales are created from Middle layer Super Output Areas (MSOAs) derived from output area, the stable geographic building block now being used to produce statistics. District, county and region figures are aggregations of these MSOAs.

For Scotland, the geographies relate to "intermediate zones", a layer equivalent to an MSOA. From 2011, the Northern Ireland geographies relate to Lower layer Super Output Areas (LSOAs), a geographic hierarchy designed to improve the reporting of small area statistics.

## Output quality

To publish estimates within a year of the reference period, we make an adjustment to the business deaths figures to allow for reactivations. The [Eurostat and OECD manual on business demography](#) recommends waiting for two years after the reference period to allow for reactivations before business deaths figures are calculated. In the release, we estimate the number of reactivations and adjust the data accordingly. The adjustment has been applied to all industries, by removing units from the business deaths data. This can lead to different percentage adjustments at the lowest level of aggregation. In order to account for reactivations, the business deaths data are not final until the third year. The preceding two years of business deaths are considered to be provisional and subject to revision. [Table 9](#) of the dataset shows the adjustments made to the business deaths data for reactivations.

## Why you can trust our data

The Business demography publication is a [National Statistic](#). It has been assessed and is fully compliant with the [Code of Practice for Statistics](#) (that is, it meets the highest standards of trustworthiness, quality and value as laid out in the Code).

# 6 . Methods used to produce the Business demography data

## How we collect the data, main data sources and accuracy

The information used to create and maintain the Inter-Departmental Business Register (IDBR) is obtained from five main administrative sources. These are:

- HM Revenue and Customs (HMRC) Value Added Tax (VAT) - traders registered for VAT purposes with HMRC
- HMRC Pay As You Earn (PAYE) - employers operating a PAYE scheme, registered with HMRC
- Companies House - incorporated businesses registered at Companies House
- Department for Environment, Food and Rural Affairs (DEFRA) farms
- Department of Finance and Personnel, Northern Ireland (DFPNI)

As well as these five main sources, a commercial data provider, Dun and Bradstreet, is used to supplement the IDBR with Enterprise Group information.

In addition, the Office for National Statistics (ONS) [Business Register and Employment Survey](#) (BRES) and other ONS surveys supplement these administrative sources, identifying and maintaining the business structures necessary to produce detailed industry and small area statistics. It should be noted that BRES is the only source of local unit (site) information. It is used to populate the employment and classification of a business.

A more detailed paper on the [IDBR sources, structures and updating \(PDF, 60KB\)](#) process is published on the ONS website.

## How we process and quality assure the data

Since the publication is an extract from the IDBR, which is based on administrative records, there is no estimation or imputation. However, it is important to note that underlying the extracts are IDBR processing rules, which impact, for example, on the timeliness and classification of businesses.

Information on the administrative source data used to construct and compile the IDBR, the quality control checks, processes and maintenance procedures are described in Introduction to the IDBR.

The constituent data used to populate the IDBR are received from the administrative sources daily, and they are subjected to rigorous testing and quality control checks before being uploaded onto the IDBR. Checks include matching HMRC, VAT and PAYE information; checking that business locations and structures match PAYE and VAT information; checking that employment data are correct; checking that businesses are active; and allocating businesses to correct standard industrial classifications. These tasks are carried out via automatic system checks, with any changes or errors reported for manual investigation, checking before correction and subsequent uploading.

IDBR data are extracted for the publication and placed into a series of pre-defined tables using SAS Enterprise Guide software. Data in each of the tables are then quality checked to ensure that information has been extracted correctly and reflects the information contained on the IDBR.

Statistical disclosure control methodology is also applied to the data to ensure that information attributable to an individual organisation is not disclosed.

## How we analyse and interpret the data

The starting point for the calculation of Business demography data is the concept of active businesses in a reference year. These are defined as businesses that had either turnover or employment at any time during the reference period. New business registrations are referred to as business births and the birth rate is calculated using the number of business births as a proportion of the active businesses.

Businesses that have ceased to trade, which are identified through de-registration of the administrative units, that is, VAT and PAYE, are referred to as business deaths. The business death rate is calculated using the number of business deaths as a proportion of the active businesses.

Once the data tables have been created, continuity checks and investigations into data value changes are carried out. Comparisons are made against the previous year's data values to ensure that data movements (for example, large changes in counts for geographies or industries) are correct. If appropriate and significant, these fluctuations are reported in the statistical bulletin.

## How we disseminate the data

Business demography is released via the ONS website as an [Excel workbook](#) accompanied by a [statistical bulletin](#) explaining headline figures and changes. Publication dates are available via the [GOV.UK release calendar](#).

## How we review and maintain the data processes

The Business demography datasets present analysis of VAT- and/or PAYE-registered businesses by their business activity and geographical location.

The views and requirements of government and non-government users of this product are sought regularly. The following methods are utilised for engaging with users:

- Government Statistical Service Business Registers Group. This is a cross-governmental group that identifies and addresses developments and issues affecting the IDBR; this group meets biannually.
- Business Demography Statistics steering group. The Office for Statistics Regulation (OSR) reviewed the ONS business demography statistics and reported their findings in October 2020. In determining how to meet the requirements set out in the report, we set up a steering group of key business demography users. The steering group considers not only how business demography statistics can be developed but also takes into account the underlying source data and the IDBR, which is also the basis for our UK Business: Activity, size and location publication. This group meets quarterly.
- Business Population and Demographic Statistics (BPDS) user group. Jointly convened by the ONS and the Department for Business, Energy and Industrial Strategy (BEIS), this group engages with government and non-government users, seeking their views and opinions about BPDS outputs and future developments.

We welcome comment and feedback on our publications. If you have any comments or suggestions, please e-mail [idbrdas@ons.gov.uk](mailto:idbrdas@ons.gov.uk).

## 7 . Cite this methodology

Office for National Statistics (ONS), released 17 November 2022, ONS website, methodology, [Business demography QMI](#)