

Information paper

Quality and Methodology Information

General details

Title of output:	UK Business Enterprise Research and Development Survey
Abbreviated title:	BERD
Designation:	National Statistics
Geographic Coverage:	UK
Date of last QMI:	December 2012
Contact details:	RandD@ons.gsi.gov.uk

Executive summary

The main purpose of the Business Enterprise Research and Development (BERD) survey is to supply data for policy purposes on Science and Technology, of which Research and Development (R&D) is an important part. It uniquely provides information on expenditure on R&D undertaken by UK businesses, the source of funding, and also includes total R&D employment. The survey is conducted to provide knowledge on overall R&D in UK business enterprises, and to allow comparisons of the UK data with other countries. The R&D data are used by major policy makers in the UK and in the EU and are used in EU aggregates. They are perceived as a key determinant of economic growth.

R&D and related concepts follow internationally agreed standards defined by the [Organisation for Economic Cooperation and Development \(OECD\)](#)¹ and published in the [Frascati manual](#)². This is a document that stipulates the methodology for collecting and using statistics about R&D in countries that are members of the [OECD](#)¹. R&D is defined as ‘Creative work undertaken on a systematic basis in order to increase the stock of knowledge of man, culture and society and the use of this stock of knowledge to devise new or enhanced materials, products, devices, processes or services’. R&D must contain an appreciable amount of novelty.

The survey has been run annually since 1993. A sample of approximately 5,000 UK businesses was selected for this survey from a continually updated register of R&D performers. The largest R&D performers are asked to select the industry product group that best describes the type of R&D activities that they undertake. In 2010, these product groups were updated to better reflect the new Standard Industrial Classification 2007 codes (see the Coherence and comparability section).

The results from the survey are published annually as a Statistical Bulletin. The outputs are also transmitted to Eurostat to comply with [European Commission \(EC\) Regulation 995/2012](#)³.

This document contains the following sections:

- Output quality;
- About the output;
- How the output is created;
- Validation and quality assurance;
- Concepts and definitions;
- Other information, relating to quality trade-offs and user needs, and;
- Sources for further information or advice.

Output quality

This document provides a range of information that describes the quality of the output and details any points that should be noted when using the output.

ONS has developed [Guidelines for Measuring Statistical Quality](#)⁴ these are based upon the five European Statistical System (ESS) quality dimensions. This document addresses these quality dimensions and other important quality characteristics, which are:

- Relevance;
- Timeliness and punctuality;
- Comparability;
- Coherence and comparability;
- Accuracy;
- Output quality trade-offs;
- Assessment of user needs and perceptions, and;
- Accessibility and clarity

More information is provided about these quality dimensions in the sections below.

This information relates to BERD, an annual survey designed to collect expenditure and employment figures relating to R&D undertaken by UK businesses. The results of this survey can be found in the [Business Enterprise Research and Development Statistical Bulletin](#)⁵.

The survey covers estimates of UK businesses which are known to carry out R&D. The statutory basis of the [BERD](#)⁵ survey in Great Britain is the Statistics of Trade Act 1947 and in Northern Ireland, it is the Statistics of Trade and Employment (NI) Order 1988. Returns for businesses in Northern Ireland are sent out by the [Department for Finance and Personnel, Northern Ireland \(DFPNI\)](#)⁶.

About the output

Relevance

(The degree to which the statistical outputs meet users' needs).

What it measures	The BERD ⁵ survey collects information on total expenditure on R&D undertaken by UK businesses enterprises, total R&D employment, and sources of funds.
Frequency	The survey is conducted on an annual basis (results published in November of the following year).
Sample size	The UK sample size is approximately 5,000 businesses (4,000 in GB and 1,000 in Northern Ireland). There were approximately 4,300 responses in 2013.
Periods available	Annually since 1993.
Sample frame	The sampling frame is a reference list of all known R&D performers in GB and NI.
Sample design	<p>For GB, a stratified random sample is used where the strata are defined as:</p> <ol style="list-style-type: none">1. businesses which have reported R&D expenditure of greater than £4.4m (referred to as 'large R&D performers'), or have been identified as such; and2. the remaining businesses identified as (or potential) R&D performers (referred to as 'smaller R&D performers') and are allocated into strata using their employment and industry product group. <p>(See Page 5 for further information).</p> <p>For NI, a census survey is carried out of all known R&D performers</p>
Weighting & estimation	R&D estimation uses a simple matched pairs methodology and ratio estimation.
Outliers	For all responders who are not classed as large R&D performers, an outlier ratio is calculated and the top and bottom 5% are trimmed. The outlier ratio is calculated by dividing R&D employment by total business employment.

The primary purpose of the [BERD](#)⁵ survey is to supply data on Science and Technology for policy purposes, of which R&D is an important part. Total expenditure on R&D undertaken by UK businesses, total employment, and sources of funds for R&D are essential elements of the survey. The information is used by government departments and other organisations for planning, policy, and monitoring purposes.

A Survey Management Board reviews this survey on a regular basis, and ensures that it is conducted to obtain the information needed, while imposing the minimum burden on respondents. There will also now be regular quality reviews which will take place every three years in order to improve the quality of the survey.

The sample and survey results only cover 'business enterprises' as defined in the [Frascati manual](#)². This excludes government organisations, higher education establishments, and charities. Smaller businesses identified as R&D performers are sampled using various sampling fractions. The selected businesses are sent a shorter version of the R&D questionnaire which requests just the R&D expenditure and employment totals. The detailed information for these businesses is estimated using the data received from the questionnaires of larger R&D performers. The totals for the unsampled businesses are estimated using ratio estimation with business employment as the auxiliary variable, a variable held on the Inter-Departmental Business Register (IDBR).

Users and uses

A primary use of the [BERD](#)⁵ data is that it is a key component in measuring the UK's gross domestic expenditure on R&D. The other components are the UK government, the higher education sector and the non-profit sector. Gross expenditure of R&D in the UK performed by all sectors of the economy is reported separately, as part of a publication commonly referred to as [GERD](#)⁷.

Changes introduced as part of the amendments to the System of National Accounts (SNA) in 2008 and European System of Accounts (ESA) in 2010 specify that R&D, from 2014 onwards, should not be considered as an ancillary activity and instead expenditure on R&D should constitute investment in R&D assets, which as a consequence needs to be capitalised in the UK National Accounts. In short, R&D expenditure will now contribute to the compilation of the value of the UK's net worth and be included as part of Gross Domestic Product (GDP) estimates. Please see the ONS [ESA 2010](#)⁸ page for more information.

There are numerous other users within and outside government who use these data to produce various analyses and to inform policy decisions. These include:

- [European Union's Statistical Office \(Eurostat\)](#)⁹ - the UK provides statistics measuring R&D activity in accordance with the European Commission Regulation No. 995/2012 of the European Parliament and the council. The business estimates in this publication are used to provide information that is consistent with other EU member states and to enable benchmarking to be achieved. [Europe 2020 targets](#)¹⁰ for economic growth include 3% of the EU's GDP (both private and publicly funded) to be invested in R&D by 2020. This means that these estimates are essential in monitoring progress towards this target;
- [OECD](#)¹ - use [BERD](#)⁵ data for constructing internationally comparable data tables and producing regular statistical publications such as the 'Main Science and Technology indicators' (MSTI) and 'The Annual Business Enterprise Research and Development' statistics (ANBERD). The data are also used for analytical studies, which underpin economic analysis and policy reviews;
- the [Department for Business Innovation and Skills \(BIS\)](#)¹¹ use [BERD](#)⁵ data to assess policy impact and inform debate. R&D data underpin their assessments of UK innovation performance as well as international work in the field. BIS produced an R&D Scoreboard until 2010. The R&D Scoreboard was the leading source of information and analysis on the world's top R&D active companies, both in the UK and globally. The R&D scoreboard listed the 1,000 UK and 1,000 global companies investing most in R&D, enabling companies to benchmark their own investments against sector leaders. The scoreboard was based on data abstracted from companies' annual reports and accounts. The last scoreboard to be published includes commentary and analysis prepared by the Economist Intelligence Unit for the year 2010. View the latest [R&D scoreboard](#)¹²;
- the [Welsh Government \(WG\)](#)¹³ and the [Scottish Government \(SG\)](#)¹⁴ use [BERD](#)⁵ data as a key indicator for measuring the performance of their respective economies within the UK, as well as to monitor and develop R&D policies which seek to increase R&D investment;
- [HM Revenue and Customs \(HMRC\)](#)¹⁵ use [BERD](#)⁵ data to support analysis and advice on policy development. [BERD](#)⁵ is one of the key data sources for policy evaluation;
- the [Department for Finance and Personnel, Northern Ireland](#)⁶ carry out their own annual survey into R&D and then provide ONS with the Northern Ireland R&D data for inclusion in the UK published results;

- the [Research and Development Society](#)¹⁶ is a UK-based organisation formed to promote the better understanding of R&D in all its forms. It holds regular afternoon and evening meetings, usually at the Royal Society in London. The Research and Development Society makes use of BERD data, as a key source of information, for understanding how much UK businesses are investing in R&D on an annual basis and to inform wider debates about R&D;

Requests for [BERD](#)⁵ data are made from a variety of sources including academics, government departments, and economic consultants. This means that the data are used in various publications. For example;

- in 2011, the [Royal Society](#)¹⁷ published 'Knowledge, Networks and Nations: Global scientific collaboration in the 21st century' which included data published in ONS BERD 2009 Statistical Bulletin as part of the scientific landscape in 2011 (see page 31);
- in one of a series of working papers by the Social, Technological and Environmental Pathways to Sustainability (STEPS) centre;
- the [Economic and Social Research Council \(ESRC\)](#)¹⁸ published 'Trends in the Global Distribution of R&D since the 1970s: Data, their Interpretation and Limitations' which refers extensively to BERD data.

For users of business statistics, there is a [Business and Trade Statistics community](#)¹⁹ on the StatsUserNet website. [StatsUserNet](#)²⁰ is the Royal Statistical Society's new interactive site for users of official statistics. The community objectives are to promote dialogue and share information between users and producers of official business and trade statistics about the structure, content and performance of businesses within the UK. Anyone can join the discussions by registering via either of the links above.

Timeliness and punctuality

(Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the gap between planned and actual publication dates.)

For the [BERD](#)⁵ survey, the time between the end of the reference year and the publication date is approximately 11 months. The results are usually published in November each year. An internal investigation was carried out to identify if it is feasible to publish these results earlier. It concluded that because of reliance on the external provision of Northern Ireland data, which cannot be provided before mid October each year, the UK aggregates cannot be published earlier than November.

In the unlikely event of a change to the release dates, public attention will be drawn to the change and the reason fully explained as set out in the [Code of Practice for Official Statistics](#)²¹.

For more details on related releases, the [Government Statistics Publication Calendar](#)²² is available online and provides 12 months' advance 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 Official Statistics](#)²¹.

How the output is created

Data collection

Two types of questionnaire are sent to businesses requesting a calendar year report. If this is not available, businesses are asked to provide the dates of the 12 month period they are reporting for. Estimates are acceptable if actual figures are unavailable.

Long questionnaires (approximately 400) are sent to GB businesses who have returned expenditure of £4.4m or more in either of the previous two years surveys regardless of the number of employees that they have. Businesses receiving this questionnaire are requested to provide a breakdown of capital and non-capital expenditure on in-house R&D; description of the type of R&D performed (industry product group) and the type of research undertaken; how in-house R&D expenditure for the relevant year was funded; how much R&D was purchased and how this was funded; number of employees working on R&D and the full time equivalent (FTE); type of employees (researchers, technicians and support staff) and postcodes which relate to the workplaces where R&D is carried out. All businesses known to be performing R&D (around 1,000) in Northern Ireland receive a similar long form.

With R&D being capitalised in the UK National Accounts, additional questions were added to the 2011 long form to collect information on the owner of the R&D assets, and also how long the business would expect to benefit from an investment in research.

Short questionnaires (approximately 3,600) are sent to all other GB businesses in the sample. Businesses receiving this questionnaire are requested to provide expenditure on in-house R&D; whether R&D relates to civil and/or defence; how much R&D was purchased and the number of employees working on R&D.

Sample and design

The sample and survey results cover 'business enterprises' as defined in the [Frascati manual](#)². This excludes government organisations, higher education establishments, and charities.

The UK [BERD](#)⁵ Survey covers estimates of UK businesses which are known to carry out R&D. Using the whole UK business population would not be suitable for this survey, as R&D takes place in only a small proportion of businesses. A comprehensive list of approximately 28,000 UK businesses (27,000 in GB and 1,000 in NI) is used as a sampling frame and is updated annually before the survey selection begins. Stratification of the GB survey is by level of R&D expenditure, employment sizeband, and industry product group.

- The selected three employment sizebands are - <100, 100 - 399 and 400+.

GB businesses sent the long questionnaire are asked to select an industry product group that best describes the type of R&D activity they undertake. The short questionnaire responders are allocated an industry product group from their businesses SIC 2007 which is held on the IDBR, and describes the type of activity undertaken by the business.

All GB businesses with R&D in-house expenditure of approximately £4.4m or more are included in the sample. The £4.4m may vary slightly, as it used as a guideline to identify the top 400 businesses with the highest R&D expenditure, known as key responders.

Smaller GB businesses identified as R&D performers are sampled using various sampling fractions. The detailed information for these businesses is estimated using the data received from the questionnaires completed by larger GB R&D performers. Totals for the unsampled businesses are estimated using ratio estimation with business employment as the auxiliary variable, a variable held on the IDBR.

All known NI R&D performers are sent a long questionnaire.

R&D GB estimation uses a simple matched pairs methodology, and ratio estimation. Information for large GB R&D performers, who are non-responders, is estimated using information from all responders in the same industry product group as the non-responder or if this is not available, historic data are used. The ratio of current and previous years' results are applied to the non responders previous years figures. For the remaining non-responding and un-sampled businesses, the R&D expenditure total is estimated separately in each strata using business employment as the auxiliary variable.

Validation and quality assurance

Accuracy

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

Sampling error

Sampling error arises when the variable estimates are based on a sample rather than a full census of the population. The difference between the estimates derived from the sample and value which would be obtained from a census is referred to as the sampling error. The [BERD](#)⁵ Survey provides standard errors information in Table 25 included in the datasets associated with this release.

Non-sampling error

Non-sampling errors are not easy to quantify and include errors of coverage, measurement, processing, and non-response. There is some difficulty in identifying the population of actual/likely R&D performers and also problems in ensuring that businesses adhere to the [Frascati manual](#)² R&D definitions. However, response rates are high, and response bias was minimised due to a questionnaire design review and an improvement exercise undertaken prior to the 2007 data collection.

The [BERD](#)⁵ Survey uses a reference list of known R&D performers to select the sample of businesses that receive the questionnaire. The reference list is updated annually, which minimises the selection of wrongly classified businesses and dead reporting units. The sample design takes into account previous

years [BERD](#)⁵ returns, to ensure key respondents are included in the sample each year. The reference list is updated from many sources including filter questions on other ONS surveys such as the Annual Business Survey, the Annual Trade in Services survey and the Innovation survey. ONS also request information on new businesses undertaking R&D from both the Welsh and Scottish Governments and also BIS.

An [Information Note](#)²³ was published by the ONS on 20 November 2012, providing an overview of the BERD survey design, with a focus on the methods and sources used to annually update the sampling frame. It concludes that ‘there is not sufficient information on how much money businesses not covered by the BERD sampling frame spend on R&D to recommend a robust methodology for adjusting for under coverage.’

Response rates provide an indication of the likely impact of non-response error on estimates. For the [BERD](#)⁵ survey, the GB response target is 90% for short questionnaire responders and 93% for long questionnaire responders. Questionnaires are despatched annually in mid February with a return date of early April. In order to achieve optimum response, two written reminders are sent to businesses, the first in mid April and the second in mid May. All businesses who have a significant impact on the survey (known as key responders), who have not replied, are also telephoned before the first set of results is produced. NI achieved 83% response in the 2012 survey.

Survey procedures

Questionnaires are scanned centrally by ONS’ Survey Processing Centre with Optical Character Recognition (OCR) used to create an image. Images are stored on the computer system, reducing paper handling, retrieval and storage. Due to confidentiality issues, the paper version is shredded and then recycled.

Once the data are recorded on the database, a series of credibility checks are applied to aid data validation.

Ratio estimation and matched pairs methodology are used with business employment being the auxiliary variable. Results are processed for the three size bands within each industry product group. For businesses which completed long questionnaires the previous year, but failed to provide data for the current year, estimation involves multiplying the businesses returned figure from the previous year by the sum of the responding businesses in the current year, and dividing by the sum of the responding businesses in the previous year. If a business is a non-responder for the current and the previous year, figures are estimated by aggregating all businesses in the same industry product group and of a similar size to the non-responder, and using the average movement between the two years.

For short questionnaires, ratio estimation is used with total business employment as the auxiliary variable. Calculation is conducted at cell level. Outliers are removed before estimation and added back in after estimation has been conducted. An outlier is an observation that appears to deviate markedly from other members of the sample in which it occurs. The top and bottom 5% in each cell are trimmed as long as the cell contains 20 observations or more.

A per capita ratio is calculated for each of the long questionnaire cells and applied to the corresponding short questionnaire cells. Ratio estimation methods are used to estimate the short questionnaire estimates from the long questionnaire detail.

To estimate for short questionnaire employment figures, total business employment for all businesses in the sampling frame is calculated for each cell. All inliers have their R&D employment aggregated, and this is divided by the aggregate total business employment to give a per head value to use as a base for the cell to be weighted by. The sample frame employment for each cell is then multiplied by the per head R&D employment to give a weighted value for that cell. The outliers then have their question values aggregated together and added to the weighted figure.

The [BERD](#)⁵ Survey collects R&D employment under the headings of Civil and Defence. To obtain R&D employment values at the industry product group level the following procedure takes place. For each business, the ratio of salaries and wages for the first product group to the total expenditure on salaries and wages for all product groups is calculated. This is then multiplied by each employment category, eg, Scientists, Engineers and Researchers, Technicians and Other staff. This gives the estimate for R&D employment by product group. This process is repeated for each civil and defence product group. Civil and defence estimates are treated separately.

Estimates are revised in accordance with ONS' Revision Policy. This is due to misreporting and the late receipt of data.

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.)

In response to a [UK Statistics Authority](#)²⁴ requirement to improve published information on the coherence of R&D statistics which was reported in the [Assessment of Compliance with the Code of Practice for Official Statistics: Statistics on Research and Development](#)²⁵, the ONS published an [Information Note \(807.8 Kb Pdf\)](#)²⁶ on 20 November 2012. This Information Note concludes 'that BERD and GERD statistics are consistent with most other National Statistics relating to R&D available from other departments.'

The introduction of SIC 2007 in 2009 has resulted in some businesses' R&D data moving to a different product group than previously published. The largest impact has been on businesses with publishing activities as these have been moved from the manufacturing sector and are now included under Miscellaneous Business Activities. Other changes are documented in the background notes of the latest [BERD](#)⁵ publication.

The BIS [R&D Scoreboard](#)¹² reported the R&D expenditure of the top 1,000 performing R&D UK based firms taken from business accounts, and therefore includes R&D performed overseas using funding by UK firms. However, there are coverage differences between the Scoreboard and the [BERD](#)⁵ Survey. Comparable time series are available going back to the year 1981.

Concepts and definitions

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

R&D and related concepts follow internationally agreed standards defined by the [OECD](#)¹, and published in the [Frascati manual](#)². R&D is defined as 'creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society and the use of the stock of knowledge to devise new applications'. The UK has an obligation to collect and provide R&D data under European Commission (EC) Regulation 995/2012. The whole UK economy is covered and data are published at product group level. The existing regulation was reviewed as part of the requirements under Article 4 of implementing Decision 1608/2003/EC of the European Parliament and of the Council, and was finalised and implemented at the end of 2012.

Users need to be aware that R&D activity is distinguished by the presence of an appreciable element of novelty. If the activity follows an established pattern it is excluded; if it departs from routine and breaks new ground it is included. For example, activities such as routine testing, market research, patent applications, trial production runs and artistic work are excluded. Overheads of R&D projects are included. Value Added Tax is excluded

Other information

Output quality trade-offs

(Trade-offs are the extent to which different dimensions of quality are balanced against each other.)

The BERD data are currently published approximately 11 months after the end of the reference year and the data undergo extensive checks prior to publication. The response rates are required to be very high because R&D can be unpredictable in a business from year to year, so to keep the data quality high, ONS require actual data to be returned. Although data will usually be revised in the next publication due to misreporting and late returns, the initial estimate is an important requirement of both the UK and the EU.

Assessment of user needs and perceptions

(The processes for finding out about use and users, and their views on the statistical products.)

The BERD survey undergoes a five yearly review and collects the views of respondents and users of the R&D data. Where possible, new requirements identified from the survey are acted upon, but consideration is given to both user requirements and respondent burden.

Some of the main requirements include more regional data breakdowns and also more detailed information on R&D employees. The size of the survey means that it is very difficult to produce these extra variables as the number of respondents would be so small that they would be considered statistically unreliable. The additional cost and burden on respondents is also a key factor in not increasing the sample size.

Changes to the survey must be made when changes to European law are introduced. The classification of R&D as an intangible asset in the System of National Accounts means that work is being undertaken by ONS to ensure that the additional requirements will be available to meet these changes, and also to ensure that the UK does not incur financial penalties.

Sources for further information or advice

Accessibility and clarity

(Accessibility is the ease with which users are able to 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.)

ONS's recommended format for accessible content is a combination of HTML web pages for narrative, charts and graphs, with data being provided in usable formats such as CSV and Excel. The ONS 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 the ONS website but not produced by the ONS, or referenced on the ONS website but stored elsewhere, may vary. For further information please refer to the contact details at the beginning of this document.

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

- [Terms and conditions \(for data on the website\)](#)²⁷;
- [Copyright and reuse of published data](#)²⁸;
- [Pre-release access \(including conditions of access\)](#)²⁹; and
- [Accessibility](#)³⁰.

In addition to this Quality and Methodology Information, Basic Quality Information relevant to each release is available in the background notes of the relevant Statistical Bulletin the latest publication is [Business Enterprise Research and Development, 2012](#)⁵.

References

	Title of reference	Website location
1	Organisation for Economic Co-operation and Development (OECD)	http://www.oecd.org/
2	The Frascati Manual	http://www.oecd.org/document/6/0,3343,en_2649_34451_33828550_1_1_1_1,00.html
3	EU Commission Regulation no. 995/2012	http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:299:0018:0030:EN:PDF
4	Statistical Quality	http://www.ons.gov.uk/ons/guide-method/method-quality/quality/guidelines-for-measuring-statistical-quality/index.html
5	BERD Publication	http://www.ons.gov.uk/ons/dcp171778_337993.pdf

6	Department for Finance and Personnel, Northern Ireland (DFPNI)	Department for Finance and Personnel, Northern Ireland
7	GERD	http://www.ons.gov.uk/ons/dcp171778_355583.pdf
8	ESA10	http://www.ons.gov.uk/ons/guide-method/development-programmes/esa2010/index.html
9	Eurostat	http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/
10	Eurostat – Europe 2020 targets	http://ec.europa.eu/europe2020/europe-2020-in-a-nutshell/targets/index_en.htm
11	Department of Business, Innovation & Skills (BIS)	https://www.gov.uk/government/organisations/department-for-business-innovation-skills
12	BIS – R&D scoreboard	http://webarchive.nationalarchives.gov.uk/20101208170217/http://www.innovation.gov.uk/rd_scoreboard/default.asp
13	Welsh Government (WG)	http://wales.gov.uk/splash;jsessionid=4jfhJxLRqhBh6VL6ssyP2nyWPLpgvMZ178plZLxfbDjGhIDn1QN!-1868201774?orig=/
14	Scottish Government	http://www.scotland.gov.uk/Home
15	HM Revenue and Customs (HMRC)	http://www.hmrc.gov.uk/index.htm
16	R&D Society	http://www.rdsoc.org/
17	Royal Society	https://royalsociety.org/policy/projects/knowledge-networks-nations/report/
18	Economic and Social Research Council	http://anewmanifesto.org/wp-content/uploads/rd-data.pdf
19	Business and Trade Statistics Community	http://www.statsusernet.org.uk/StatsUserNet/Communities/ViewCommunities/CommunityDetails/?CommunityKey=36dd28ed-e10a-440e-b7fb-86650b746c43
20	Stats User Net	http://www.statsusernet.org.uk/Home/
21	Code of Practice for Official Statistics	http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html
22	Government Statistics Publication Calendar	https://www.gov.uk/government/statistics/announcements
23	Information Note on BERD survey design	http://www.ons.gov.uk/ons/guide-method/method-quality/specific/business-and-energy/research---development-surveys/information-note--coverage-of-the-business-enterprise-r-d-survey.pdf
24	UK Statistics Authority (UKSA)	http://www.statisticsauthority.gov.uk/
25	UKSA Assessment of Compliance Report	http://www.statisticsauthority.gov.uk/assessment/assessment/assessment-reports/assessment-report-218---statistics-on-research-and-development.pdf
26	Information Note on Coherence with other R&D official statistics	http://www.ons.gov.uk/ons/guide-method/method-quality/specific/business-and-energy/research---development-surveys/information-note--coherence-of-uk-r-d-statistics.pdf
27	Terms and conditions (for data on the website)	http://www.ons.gov.uk/ons/site-information/information/terms-and-conditions/index.html

28	Copyright and reuse of published data	http://www.ons.gov.uk/ons/site-information/information/creative-commons-license/index.html
29	Pre-release access (including conditions of access)	http://www.ons.gov.uk/ons/guide-method/the-national-statistics-standard/code-of-practice/pre-release-access/index.html
30	Accessibility	http://www.ons.gov.uk/ons/site-information/information/accessibility/index.html