

# Data Sources, Suitability and Uses

The information below relates to the [Gross Expenditure on Research and Development Scotland](#) publication. The aim of this note is to summarise key features of the publication and its use.

## Description

The Gross Expenditure on Research and Development (GERD) Scotland publication provides information on total expenditure on research and development (R&D) in Scotland and GERD expenditure broken down into its constituent parts: Business Enterprise Research and Development (BERD), Higher Education Research and Development, Government Research and Development (GoveRD) and Private Non-Profit Research and Development (PNP). 2011 is the first year that data for the PNP sector for Scotland has been available. PNP data is currently not available for previous years for the UK regions/countries.

## Sources

The data sources for the four component parts of GERD are as follows:

- BERD data are derived from the results of the ONS's annual business R&D survey. Approximately 5,000 questionnaires are sent to businesses in the UK known to perform R&D.
- HERD data are estimated by the Higher Education Funding Councils for England, Scotland, Wales and the Department for Education in Northern Ireland.
- GoveRD data are based on an annual survey of in-house R&D from most government departments, with the addition of ONS estimates for two other components: R&D performed by Local Authorities, and some R&D within central government not available from the survey.
- PNP data are collected in a biennial ONS survey which was introduced in 2011, with approximately 200 non-profit businesses being selected.

## Use

Data from the Research and Development publications are used by the Scottish Government to monitor performance and inform policies. Some of the external users of R&D statistics published by the Scottish Government include the Enterprise Networks and Local Authorities. Some common uses of the R&D statistics are as follows:

Performance Monitoring:

Gross Expenditure on Research and Development as percentage of Gross Domestic Product (GDP) is the basis of the Scottish Government National Indicator: Increase Research and Development Spending. The indicator compares Scotland's GERD as a

percentage of GDP with the equivalent average figure for the EU 28. Further information can be found [here](#).

BERD and GERD data are also used for the following:

- [Scotland's Economic Strategy](#) was published in March 2015 by the Scottish Government. Page 54 compares Scotland's performance on R&D spending in Business (BERD) and Higher Education (HERD) to selected OECD countries.
- [A Stronger Scotland: The Government's Programme for Government 2015-16](#) was published in September 2015 by the Scottish Government. Page 32 compares Scotland's performance in R&D spending in Higher Education (HERD, which is part of GERD) and its performance on BERD and GERD expenditure to average levels in the OECD and EU.
- [Reindustrialising Scotland for the 21st Century: A Sustainable Industrial Strategy for a Modern, Independent Nation](#) was published by the Scottish Government in June 2014. Page 37 mentions the importance of manufacturing to BERD expenditure, pages 62 to 65 refer to Scotland's performance on both GERD and BERD expenditure compared to other OECD countries.
- [Scotland CAN DO: Becoming a World-leading Entrepreneurial and Innovative Nation](#) was published in November 2013 by the Scottish Government. Page 3 refers to the Research and Development Spending National Indicator and page 13 refers to Scotland's performance in Higher Education R&D spending (HERD).
- [Scottish National Reform Programme 2015](#) was published in May 2015 by the Scottish Government. Chapter 3 is dedicated to Innovation and R&D.

Use of the Scottish Research and Development Statistics results, outside the Scottish Government, are provided below:

- Scottish Enterprise, [Scottish Key Facts](#). The February 2016 publication includes BERD data for Scotland and comparisons with the UK and the EU.
- [UK National Reform Programme](#), published in March 2015 includes Gross Expenditure on Research and Development as a percentage of GDP for Scotland on page 98.

### **Geographical Availability**

Data are available at the Scotland level with comparisons to UK regions and OECD countries.

### **Quality Assurance**

GERD is a National Statistics publication. It has been produced to the high professional standards set out in the [Code of Practice for Official Statistics](#) and the [Pre-release Access to Official Statistics \(Scotland\) Order 2008](#). These statistics undergo regular quality assurance reviews to ensure that they meet customer needs.

In 2012, the Research and Development publications were assessed by the UK Statistics Authority for compliance against the Code of Practice for Official Statistics. Details of the assessment are available at: [Statistics on Scottish Businesses and Research and Development \(Scottish Government\)](#)

The UKSA has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- Meet identified user needs;
- Are well explained and readily accessible;
- Are produced according to sound methods, and
- Are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

A UKSA assessment has been carried out for the ONS Research and Development statistical publications. Details of the assessment are available: [Statistics on Research and Development \(produced by the Office for National Statistics\)](#).

### **Data Available**

Most tables provide time series figures from 2001 onwards. The data are available as expenditure and as a percentage of GDP.

### **Timeliness of Data**

The data are published annually. The ONS UK GERD publication is released in March with headline Scottish GERD figures. After the release of the UK GERD publication, Scottish Government compile further analysis of the Scottish figures. It is the aim to publish the GERD Scotland publication as soon as possible after the ONS release the regional data.

### **Accuracy**

The GERD publication contains revisions for the for 2012 and 2013.

### **Comparability**

The GERD Scotland publication contains comparable GERD, BERD, HERD, GoveRD and PNP data for the English Government Office Regions, Wales and Northern Ireland. Comparable PNP data is available for the English Government Office Regions, Wales and Northern Ireland for 2011 onwards only.

The UK GERD publication is available [here](#).

### **Links to Data**

Data tables are available at:

<http://www.gov.scot/Topics/Statistics/Browse/Business/RD/GERDTables>