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Introduction:

'SET Statistics' is a summary of key science, engineering and technology indicators and is prepared in collaboration with the Office for National Statistics.

It aims to:

- Provide historical reporting of Government financing of Science, Engineering and Technology (SET) activities in the UK
- Describe the relationship between the funders and performers of Research and Development (R&D) in the UK
- Report on business enterprise R&D expenditure
- Show how the UK compares with other G7 countries.

Notes:

- 1) The main source of the statistics is the annual Office for National Statistics (ONS) survey of R&D in Government. Other sources include ONS's annual survey of R&D in businesses; and the OECD's Main Science and Technology Indicators database.
- 2) For the purpose of Government SET statistics, Science, Engineering and Technology is taken to include:
 - research and development 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 this stock of knowledge to devise new applications;
 - technology transfer activities associated with research and experimental development and contributing to the dissemination and application of scientific and technical knowledge; and
 - scientific and technical postgraduate education and training.This definition of SET excludes all those other scientific, technical, commercial and financial steps that are often necessary for the successful development and marketing of new or improved products, processes or services.

Gross expenditure covers all R&D performed in the country, irrespective of who pays for it, including funding from abroad. However, it excludes R&D performed abroad even if it is funded from the UK. **Net expenditure** is Gross expenditure less any funding received for R&D - this is to avoid double counting.
- 3) R&D is measured under the guidance of the Frascati Manual
http://www.oecd.org/document/6/0,3343,en_2649_34451_33828550_1_1_1_1,00.html
- 4) For R&D funded by Government the primary purposes are:
 - ppA, general support for research - all basic and applied R&D which advances knowledge for its own sake; support for postgraduate research studentships (PhDs);
 - ppB, Government services - R&D relevant to any aspect of Government service provision (all defence included here);
 - ppC, policy support - R&D which Government funds to inform policy (excluding ppB and ppD) and for monitoring developments of significance for the welfare of the population;
 - ppD, technology support - applied R&D that advances technology underpinning the UK economy (but excluding defence). The category includes strategic as well as applied research, and pre-competitive research under schemes such as LINK;It should be noted that these boundaries are determined by the Governments primary purpose in funding the activity and not the intentions of the researcher or the end result.
- 5) From 1993-94 all expenditure data supplied by ONS includes VAT. Data prior to 1993-94 were collected on a VAT exclusive basis, but it is thought that variable amounts of VAT had been included by many departments due to difficulties in separating out expenditure subject to VAT.
- 6) The OECD terminology is used to classify main sectors of the economy. Government corresponds to the General Government sector of the UK National accounts. Business enterprise corresponds to the corporate sector and includes public corporations and research associations as well as commercial and industrial companies. Private non-profit (PNP) sector includes research charities and independent research organisations, and corresponds to the Personal sector of the National Accounts except that the higher education institutions (HEIs) are excluded and put into a separate OECD sector Higher Education.

7) Research Councils

The figures from 1994-95 show the new structure of the Research Councils resulting from the 1993 Science, Engineering and Technology White Paper. They also take account of the grouping together of the Swindon-based Research Councils' pension arrangements and the consequent changes in accounting for pensions expenditure.

8) Higher Education Funding Councils

- The structure of higher education has undergone a radical change since the mid-1980s, with rapid expansion of the numbers of students, the translation of the polytechnics into universities and increases in the level of externally funded research. From 1993-94 funding has been organised through separate Funding Councils for England, Scotland, Wales and the Department for Education in Northern Ireland.
- All HEIs are now covered including universities previously funded through the Universities Funding Council (UFC); the former polytechnics in England and Wales; institutions in Scotland previously funded by the Scottish Office Education Department (SOED); the Open University; and Cranfield University. Funding of R&D in the former polytechnics in England is included from 1992-93, and the Open University and Cranfield are included in the HEFC total from 1993-94, before then they were in the DFE total. R&D in institutions formerly funded by SOED is included from 1993-94, but is excluded in earlier years.
- Up to 1992-93, estimates of Government funded R&D in the higher education sector were based on the finance returns from the old universities, using a method containing coefficients obtained in the mid-1980s for the proportion of expenditure attributed to research. The broad assumptions used in the methodology meant that the derived estimates had a significant margin of error and were also becoming out-of-date.
- The collection of finance statistics also changed significantly from the commencement of the academic year 1994-95, when all institutions completed the same finance statistics return to the new Higher Education Statistical Agency (HESA). This differs significantly from that completed by the old universities.
- Thus, following agreement between HEFCE, SHEFC, HEFCW, ONS and OST, a new method was established in 1996 to estimate Government funded R&D expenditure in HEIs. The new method uses grant income as a proxy for expenditure. The grants have been classified into three groups research-orientated grants, teaching-orientated grants, and other grants.
- The research-orientated grants comprise the block research grant plus other grants which are deemed to be used for research. The teaching-orientated grants are those considered to be related to teaching-only activities and contribute nothing to the research expenditure estimate. The other grants category is those grants which are not allocated specifically for research or teaching but which may contain elements of both to varying degrees.
- In the case of the postgraduate research (PGR) element of the teaching grant it has been agreed by the Funding Councils, ONS and OST that, by considering the total resource (grant plus fee) for a postgraduate student, one-third of PGR will be included in the overall estimate of research expenditure.
- This new method is sufficiently distinct from that used previously as to preclude the backwards revision of data published before 1993-94.
- The figures for the Funding Councils and Research Councils take account of the transfer of funds to the Science Vote. From April 1993 some funds previously allocated directly to HEIs were transferred to research councils to target support for particular projects performed within HEIs, to enable them to cover all direct costs, excluding premises and central computing, plus a contribution to overheads.

9) Government departments

Due to machinery of Government changes, caution should be taken when examining long-term departmental funding.

- Ministry of Agriculture Fisheries and Food (MAFF): MAFF's progressive withdrawal from the provision of subsidised agricultural advice was completed by 31 March 1996.
- Department for Culture, Media and Sport (DCMS): Formerly the Department for National Heritage (DNH) before May 1997: expenditure begins in 1992-93 and includes Sports Council (from DFE) and the British Library and Natural History Museum (from Other Departments).
- Ministry of Defence (MOD): There are breaks in the time series between 1991-92 and 1992-93, and between 1992-93 and 1993-94 reflecting: a) reassessment of the proportion of MoD R&D expenditure that should be classified as research as opposed to development; b) the establishment of the DRA (subsequently DERA) as a trading fund, the contractorisation of the Atomic Weapons Establishment and associated changes in accounting procedures. Further details can be found in Defence Statistics Bulletin nos 1 and 2 Changes to the statistics of MoD's R&D expenditure, published by Defence Analytical Services Agency. These are available from Rm 102, Northumberland House, Northumberland Avenue, London WC2N 5BP. Figures for 1993-94 onwards include the rationalisation costs of the DERA.
- Department for Education and Skills (DfES): The Department of Education and the Department for Employment were amalgamated in 1995-96 to become the Department for Education and Employment. The Open University and Cranfield University were both transferred to the HEFCE from 1993-94. Training Agency is included from 1990-91. In 2000-01, DfEE was reorganised into DfES. In June 2007, DFES was disbanded with functions being passed to the Department for Children, Schools and Families (DCSF) and the Department for Innovation, Universities & Skills (DIUS).
- Department of the Environment, Transport and the Regions (DETR): The Department of the Environment and the Department of Transport were amalgamated in 1997 to form the Department of the Environment, Transport and the Regions (DETR). The Building Research Establishment moved from the public sector to the private sector in 1997-98. Transport Research Laboratory (TRL) moved to the private sector at the end of March 1996. Payments to TRL of recoverable VAT in and following 1996-97 result in an increase in expenditure.

- Department of Health (DH) and Department of Social Security (DSS): DHSS expenditure is split between DH and DSS from 1988-89. Health includes R&D funded by the Department as well as that funded by the NHS. The total for NHS for England for 1995-96 was obtained from an exercise in 1996 to determine the total net costs to all NHS Trusts of their involvement in R&D. Previously, only estimates have been available for NHS research and research-related expenditure which, for example, including the DH SET return, totalled 385 million in 1994-95. The following points about R&D Support Funding for NHS Providers should be noted:
 - i. The figures shown do not include the basic costs of treating patients who are involved in R&D;
 - ii. The outturn for 1995-96 was obtained from an exercise in 1996 to determine the total net costs to all NHS Trusts in England of their involvement in R&D. This exercise was undertaken to allow a move in 1997-98 to contracting for R&D support funding on the basis of actual costs, rather than the existing R&D system of subsidies paid to Trusts in that year.
- Health and Safety Commission/Executive (HSC): HSC includes nuclear safety from 1990-91 and offshore safety from 1991-92, which were both transferred from the former Department of Energy (DEn).
- Home Office (HO): The decrease in expenditure in the Home Office from 1993-94 reflects a reassessment of R&D in the Police Scientific Development Branch.
- Department for International Development (DfID): Formerly the Overseas Development Administration (ODA), before May 1997.
- Department of Trade and Industry (DTI): DTI includes the former Department of Energy from 1992-93. In June 2007, DTI was disbanded with functions being passed to the Department for Business Enterprise & Regulatory Reform (BERR) and the Department for Innovation, Universities & Skills (DIUS). In 2009, DIUS and BERR merged to form BIS. DIUS was renamed as BIS Science and BERR renamed as BIS. A number of departments previously reported under DIUS have been transferred to BIS. From 2010-11, BIS Science reported under BIS. From 2011-12 includes all UK subscription to European Space Agency (total £255.1m), and some budget transfers from Defra and DfT as well as for Met office which was moved out of MoD. BIS science programme spend has been restated back to 2007-08 so that it is now consistent with the HEFCE outturn.
- UK Atomic Energy Authority (UKAEA): From 1999-2000 the figures for UKAEA are to be included within those for the Department of Trade and Industry, as UKAEA has been reclassified to the Government sector as a non-departmental body serving the Government. The Business figures are to be revised in the product group "Refined petroleum products: processing of nuclear fuel" to take account of this.
- Welsh Office (WO): The reduction in expenditure in 1992-93 is due to a transfer of responsibilities of Education R&D to the HEFCW. From 1993-94 includes some central NHS budget funds devolved to the Welsh Office, part of the health research budget has now been devolved back to the DH in 1996-97.
- Northern Ireland Office (NIO): In 1993-94 Department of Health and Department of Agriculture data have been adjusted to remove research falling outside the Frascati definitions of R&D. From 1997-98, the Department of Health and Social Services will centrally control the NDPBs and Agency research budget. In 2011-12 new Department of the Environment included for the first time, and will be used as a base year going forward. No accurate back data available at present
- The sharp fall in 2011-12 net research expenditure was reported by the MOD's Defense Equipment & Support (DE&S) as a number of project teams have moved from development phase to manufacturing resulting in a tailing off of their spend.
- From 2010-11 onwards BIS Science included under BIS, and NHS Wales started reporting separately from WAG. Museum Wales included from 2011-12.

10) European Union

The European Union (EU) supports R&D programmes in member states. The UK makes a positive net contribution to the EU budget. A proportion of this net contribution is assumed to be for R&D and is included in some of the tables. It is excluded when making comparisons with other countries, because its inclusion would be inconsistent with OECD Frascati definitions of national R&D expenditure and therefore with statistics of these countries.

11) Launch Investment

Launch investment is a risk-sharing government investment in the design and development of civil aerospace projects in the UK. The investment is repayable at a real rate of return, usually via levies on sales of the product. Launch investment is only available to the civil aerospace sector and is permitted under the Civil Aviation Act 1982, which charges the Secretary of State with "organising, carrying out and encouraging measures for the designing, development and production of civil aircraft."

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Abbreviations:

BBSRC - Biotechnology and Biological Sciences Research Council
BERD - Business Enterprise Research and Development
BERR - Department for Business Enterprise & Regulatory Reform
CCLRC - Council for the Central Laboratory of the Research Councils
DCMS - Department of Culture, Media and Sport
DCSF - Department for Children, Schools and Families
DECC - Department of Energy and Climate Change
DEn - Department of Energy
DENI - Department of Education Northern Ireland
DES - Department of Education and Science
DETR - Department of the Environment, Transport and the Regions
DFE - Department for Education
DfEE - Department for Education and Employment
DfES - Department for Education and Skills
DFID - Department for International Development
DH - Department of Health
DHSS - Department of Health and Social Security
DIUS - Department for Innovation, Universities and Skills
DoE - Department of the Environment
DoT - Department of Transport
DTI - Department of Trade and Industry
ED - Employment Department
EPSRC - Engineering and Physical Sciences Research Council
ESRC - Economic and Social Research Council
GDP - Gross Domestic Product

GERD - Gross Domestic Expenditure on Research and Development
GOVERD - Government Intramural Expenditure on R&D
HEFC - Higher Education Funding Councils (see DENI, HEFCE, HEFCW, SHEFC)
HEFCE - Higher Education Funding Council for England
HEFCW - Higher Education Funding Council for Wales
HEI - Higher Education Institution
HERD - Higher Education Expenditure on Research and Development
HO - Home Office
HSE - Health and Safety Executive
MAFF - Ministry of Agriculture, Fisheries and Food
MoD - Ministry of Defence
MRC - Medical Research Council
MSC/TA - Manpower Services Commission/Training Agency
NERC - Natural Environment Research Council
NHS - National Health Service
NI - Northern Ireland
OST - Office of Science and Technology
PCFC - Polytechnics and Colleges Funding Council
PNP - Private Non-Profit
PPARC - Particle Physics and Astronomy Research Council
R&D - Research and Development
SE - Scottish Executive (formerly Scottish Office)
SERC - Science and Engineering Research Council
SHEFC - Scottish Higher Education Funding Council
STFC - Science & Technology Facilities Council

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Table 1.1: Net Government expenditure on SET by departments (cash), UK, 2002-01 to 2011-12

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
£ million										
Research Councils										
EPSRC	501	425	489	555	643	694	734	756	r 845	854
MRC ⁽¹⁾	359	367	379	416	471	494	581	634	679	672
STFC ⁽¹⁾	-	-	-	-	-	552	590	607	563	542
BBSRC ⁽¹⁾	242	268	277	322	366	373	393	444	435	488
NERC ⁽¹⁾	205	295	317	373	361	364	396	454	449	417
ESRC	77	89	105	125	144	151	162	174	182	180
AHRC ⁽²⁾	-	-	-	69	82	88	94	89	92	99
Pensions/Other	28	30	42	15	17	25	74	38	35	35
OST - DTI ⁽³⁾	284	452	440	578	508	-	-	-	-	-
PPARC ⁽¹⁾	249	272	295	334	329	-	-	-	-	-
CCLRC ⁽¹⁾	3	62	64	84	92	-	-	-	-	-
Total	1,947	2,259	2,408	2,871	3,014	2,742	3,024	3,196	r 3,280	3,286
Higher Education Funding Councils ⁽⁴⁾										
Total	1,626	1,665	1,804	1,928	2,085	2,252	2,247	2,403	2,304	2,259
Civil Departments										
DH (including NHS) ⁽⁵⁾	515	593	629	628	673	712	787	r 846	r 883	904
NHS	461	533	575	583	623	661	730	r 796	847	866
BIS (formerly BERR) ⁽³⁾	-	-	-	-	-	-	-	308	r 462	695
DFID (formerly ODA)	193	215	215	265	247	151	169	237	220	236
SG (formerly SE)	139	157	176	209	214	221	218	219	r 177	171
DEFRA ⁽⁶⁾	232	257	273	288	299	202	198	185	157	161
NI departments ⁽¹⁷⁾	18	21	21	21	22	23	22	22	21	79
DCMS (formerly DNH) ⁽¹⁰⁾	19	15	16	23	36	44	64	64	r 53	48
DECC ⁽¹⁵⁾	-	-	-	-	-	-	27	25	r 36	39
DfT ⁽⁷⁾	53	70	59	61	59	66	64	80	54	35
Other departments ⁽⁸⁾⁽¹²⁾	37	43	41	38	42	38	38	34	r 31	31
HO	58	48	58	73	51	43	46	45	48	25
DWP (including DSS) ⁽¹¹⁾	15	18	18	18	18	17	19	35	29	20
DfE ⁽⁹⁾⁽¹⁶⁾	-	-	-	-	-	35	33	31	27	13
HSE	19	17	28	22	17	12	12	13	12	10
WG (formerly WO) ⁽¹³⁾	46	31	32	33	10	12	11	11	r 10	9
DCLG (formerly ODPM) ⁽⁷⁾	27	30	29	27	30	25	28	29	16	7
MOJ ⁽¹²⁾	-	-	-	-	2	11	14	11	8	7
FSA	20	22	20	17	15	14	12	11	6	7
FCO ⁽¹⁴⁾	-	-	-	-	-	-	-	6	3	*
DfES ⁽⁹⁾⁽¹⁶⁾	93	52	59	100	73	-	-	-	-	-
BERR (ex DIUS and Launch Investment) ⁽³⁾	-	-	-	-	-	2	2	-	-	-
DTI (ex OST and Launch Investment) ⁽³⁾	409	334	322	300	265	-	-	-	-	-
BIS Science (formerly DIUS) ⁽³⁾	-	-	-	-	-	r 420	r 438	r 83	-	-

Table 1.1: Net Government expenditure on SET by departments (cash), UK, 2002-01 to 2011-12

		£ million									
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
	Net Launch Investment	150	215	-127	-158	-154	-154	-128	-57	-r 91	-108
	Total	2,043	2,140	1,866	1,965	1,918	r 1,896	r 2,073	r 2,236	r 2,159	2,389
Defence											
MoD (18)	Development	2,218	1,609	1,552	1,645	1,492	1,505	1,406	1,177	r 1159	753
	Research	516	524	639	598	632	635	584	575	534	553
	Total	2,734	2,133	2,191	2,243	2,124	2,139	1,991	1,752	r 1,693	1,306
	Indicative UK contribution to the EU R&D budget	440	390	325	365	374	374	593	668	647	629
	GRAND TOTAL	8,791	8,586	8,595	9,373	9,515	r 9,403	r 9,927	r 10,255	r 10,083	9,868

Notes:

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Source: ONS Government R&D Survey

Figures for the departments may not add up to the grand total shown due to rounding, and those prior to 2002-03 are shown in Table A1.1.

1) In 2010-11, MRC's expenditure included the capital spend for the construction of a new building but this tailed off in 2011-12. In April 2007, CCLRC & PPARC merged to form Science & Technology Facilities Council (STFC). In 2011-12 STFC's subscription for ESA of £21.1m transferred to BIS space. The NERC reported a decrease in spending of £32.4m due to reduction in spend abroad and no longer contributing to ESA. BBSRC reported higher spending due to campus development at Babraham Institute and capital building works at IAH Pirbright.

2) AHRC was established in April 2005.

3) From July 2007, DTI and OST were renamed Business Enterprise and Regulatory Reform (BERR) and Department of Innovation and Skills (DIUS) respectively. In 2009, DIUS and BERR merged to form BIS. DIUS was renamed as BIS Science and BERR renamed as BIS. A number of departments previously reported under DIUS have been transferred to BIS. From 2010-11, BIS Science reported under BIS. From 2011-12 includes all UK subscription to European Space Agency (total £255.1m), and some budget transfers from Defra and DfT as well as for Met office which was moved out of MoD. BIS science programme spend has been restated back to 2007-08 so that it is now consistent with the HEFCE outturn.

4) In 2009-10 expenditure rose as some capital spend that was planned for 2010-11 was brought forward and the subsequent reduction in spend reflect this.

5) Where a single year PES settlement is known, this figure is carried forward to subsequent years. The resulting apparent reduction in projected Government spend is a result of the routine application of the GDP deflator and does not signify a real reduction in planned spending.

6) The decline in 2010 spend was due to Environment Agency and VLA having less in-house expenditure. CORE DEFRA purchased less from Higher Education. VLA reported decrease in expenditure as a result of Government funding, and EA reported reduced budget & reduction in FTEs.

7) The Department of Transport, Local Government and the Regions split in June 2002 to form Department for Transport (DfT) and Office of Deputy Prime Minister (ODPM). In 2010-11, sharper reduction in spending arose due to the Spending Review identifying savings, and the fall in 2011-12 was due to small decreases across eight departments within DfT.

8) Includes the following departments: HMRC, HMT, Forestry Commission, Ordnance Survey Research, GCHQ and Ofsted. Also, includes expenditure attributed to the Forestry Commission in 2002-03 of £11.2 million, in 2003-04 of £11 million and of £12 million from 2004-05 onwards. OFFA included from 2011-12.

9) From June 2007 DfES was renamed Department for Children, Schools and Families (DCSF). From May 2010 DCSF was replaced with Department for Education (DfE). In 2011-12, expenditure fell due to move to move to drive down spend across all budgets, and reflects Ministerial priorities.

10) In 2010-11, reduced expenditure was due to the abolition of Museums, Libraries and Arts Council.

11) In 2011-12 spend and headcount down due to reduced research budget and departmental restructuring.

12) From 2006, Ministry of Justice figures are displayed separately and are no longer included under "Other departments"

13) NHS Wales included in WG from 2010-11. Museum Wales included from 2011-12.

14) FCO figures are estimated. Previously their figures were included under the Home Office.

15) DECC was created in October 2008.

16) Decrease in 2001-02 (formation of the Department for Education and Skills) was due to the transfer of responsibility for employment to the Department for Work and Pensions and for employer related equal opportunities issues to the Department for Trade and Industry.

17) In 2011-12 new Department of the Environment included for the first time, and will be used as a base year going forward. No accurate back data available at present.

18) This table comprises elements from both the Operating Cost Statement and the Balance Sheet in the DRAc. Receipts are monies received by MOD & its Trading Funds for expenditure on R&D, for example from other government departments & private industry. This money is not necessarily spent on defence-related R&D. The sharp fall in 2011-12 net research expenditure was reported by the MOD's Defense Equipment & Support (DE&S) as a number of project teams have moved from development phase to manufacturing resulting in a tailing off of their spend.

Table 1.2: Net Government expenditure on SET by departments (in real terms), UK, 2002-03 to 2011-12

	£ million (base year 2011-12)									
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Research Councils										
EPSRC	622	516	576	639	722	760	782	794	863	854
MRC ⁽¹⁾	446	445	447	480	529	542	620	666	693	672
STFC ⁽¹⁾	-	-	-	-	-	605	629	637	575	542
BBSRC ⁽¹⁾	300	325	326	371	411	409	419	467	444	488
NERC ⁽¹⁾	254	358	374	430	406	399	422	477	459	417
ESRC	96	108	123	144	161	166	173	183	186	180
AHRC ⁽¹⁾	-	-	-	79	92	96	100	94	94	99
Pensions/Other	35	36	50	17	19	27	78	40	35	35
OST - DTI ⁽¹⁾	352	549	519	666	570	-	-	-	-	-
PPARC ⁽¹⁾	309	330	348	385	369	-	-	-	-	-
CCLRC ⁽¹⁾	3	75	76	97	103	-	-	-	-	-
Total	2,416	2,742	2,840	3,310	3,383	3,004	3,224	3,357	3,349	3,286
Higher Education Funding Councils ⁽¹⁾										
Total	2,018	2,021	2,127	2,223	2,341	2,466	2,396	2,524	2,354	2,259
Civil Departments										
DH (including NHS) ⁽¹⁾	638	720	741	724	755	780	839	889	902	904
NHS	572	647	677	672	699	724	778	836	865	866
BIS (formerly BERR) ⁽¹⁾	-	-	-	-	-	-	-	323	472	695
DFID (formerly ODA)	239	261	254	305	277	166	180	249	224	236
SG (formerly SE)	173	191	208	241	240	242	233	230	181	171
DEFRA ⁽¹⁾	288	312	321	332	336	221	211	195	160	161
NI departments ⁽¹⁾	22	26	25	24	25	25	24	23	21	79
DCMS (formerly DNH) ⁽¹⁾	23	18	18	27	41	48	69	67	54	48
DECC ⁽¹⁾	-	-	-	-	-	-	28	26	36	39
DfT ⁽¹⁾	66	85	69	70	66	73	68	84	55	35
Other departments ⁽¹⁾	46	52	48	44	48	41	40	36	31	31
HO	71	58	68	84	57	47	49	47	49	25
DWP (including DSS) ⁽¹⁾	19	22	21	21	20	18	20	36	30	20
DfE ⁽¹⁾	-	-	-	-	-	39	35	32	28	13
HSE	24	21	33	25	19	13	13	13	12	10
WG (formerly WO) ⁽¹⁾	57	38	37	38	11	13	12	12	10	9
DCLG (formerly ODPM) ⁽¹⁾	34	37	34	31	33	28	29	30	16	7
MOJ ⁽¹⁾	-	-	-	-	2	12	14	12	8	7
FSA	25	27	24	19	17	16	13	12	6	7
FCO ⁽¹⁾	-	-	-	-	-	-	-	6	3	*
DfES ⁽¹⁾	116	63	70	116	82	-	-	-	-	-

Table 1.2: Net Government expenditure on SET by departments (in real terms), UK, 2002-03 to 2011-12

£ million (base year 2011-12)

	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
BERR (ex DIUS and Launch Investment) ⁽¹⁾	-	-	-	-	-	2	2	-	-	-
DTI (ex OST and Launch Investment) ⁽¹⁾	507	406	379	345	297	-	-	-	-	-
BIS Science (formerly DIUS) ⁽¹⁾	-	-	-	-	-	460	467	87	-	-
Net Launch Investment ⁽¹⁾	186	261	-150	-182	-173	-168	-137	-60	-93	-108
Total	2,535	2,597	2,200	2,265	2,153	2,077	2,210	2,349	2,205	2,389
Defence MoD ⁽¹⁾										
Development	2,752	1,953	1,830	1,897	1,675	1,648	1,499	1,236	1,184	753
Research	640	636	753	689	710	695	623	604	546	553
Total	3,392	2,589	2,584	2,586	2,384	2,343	2,122	1,840	1,729	1,306
Indicative UK contribution to the EU R&D budget	545	474	383	421	420	410	632	702	660	629
GRAND TOTAL	10,906	10,422	10,134	10,804	10,681	10,299	10,584	10,771	10,298	9,868

Notes:

All figures have been rebased to 2011-12 prices, and those prior to 2002-03 are shown in Table A1.2.

1 See notes on Table 1.1

Implied deflators

80.6 82.4 84.8 86.8 89.1 91.3 93.8 95.2 97.9 100.0

Source: ONS Government R&D Survey

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Table 2.1: Net Government expenditure on R&D by departments (cash), UK, 2002-03 to 2011-12

	£ million									
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Research Councils										
EPSRC	479	405	480	553	643	694	734	754	802	807
MRC ⁽¹⁾	358	361	376	416	471	494	581	634	679	672
STFC ⁽¹⁾	-	-	-	-	-	548	583	599	556	535
BBSRC ⁽¹⁾	240	267	275	320	364	369	383	432	421	472
NERC ⁽¹⁾	195	278	296	363	351	350	381	435	442	407
ESRC	74	83	98	116	133	147	158	170	177	173
AHRC ⁽²⁾	-	-	-	58	70	86	91	87	89	95
Pensions/Other	27	28	40	15	17	24	72	37	34	34
OST - DTI ⁽³⁾	244	388	356	503	413	-	-	-	-	-
PPARC ⁽¹⁾	249	272	295	334	329	-	-	-	-	-
CCLRC ⁽¹⁾	3	62	64	84	92	-	-	-	-	-
Total	1,870	2,143	2,281	2,763	2,883	2,714	2,984	3,148	3,201	3,194
Higher Education Funding Councils ⁽⁴⁾										
Total	1,626	1,665	1,804	1,928	2,085	2,234	2,227	2,395	2,303	2,257
Civil Departments										
DH (including NHS) ⁽⁵⁾	514	593	629	628	673	712	786	r 845	r 883	904
NHS	461	533	575	583	623	661	730	r 796	r 847	866
BIS (formerly BERR) ⁽³⁾	-	-	-	-	-	-	-	266	r 408	645
DFID (formerly ODA)	193	215	215	265	247	134	149	225	209	226
SG (formerly SE)	115	129	131	137	132	137	141	154	167	160
DEFRA ⁽⁶⁾	173	181	191	201	194	190	187	181	153	157
NI departments ⁽¹⁷⁾	17	21	21	21	22	22	22	21	20	78
DCMS (formerly DNH) ⁽¹⁰⁾	19	15	16	23	36	39	47	46	47	42
DECC ⁽¹⁵⁾	-	-	-	-	-	-	27	25	r 35	39
DfT ⁽⁷⁾	47	59	48	51	57	62	60	68	r 53	34
Other departments ⁽⁸⁾⁽¹²⁾	24	30	28	25	30	36	37	33	r 29	30
HO	57	48	58	73	50	42	44	43	42	24
DWP (including DSS) ⁽¹¹⁾	15	18	18	18	18	17	19	35	28	20
DfE ⁽⁹⁾⁽¹⁶⁾	-	-	-	-	-	35	33	31	27	13
HSE	16	14	25	19	14	12	12	13	12	10
WG (formerly WO) ⁽¹³⁾	35	31	32	33	10	12	10	10	r 9	8
DCLG (formerly ODPM) ⁽⁷⁾	27	30	29	27	30	25	27	28	16	7
MOJ ⁽¹²⁾	-	-	-	-	2	10	12	9	7	7
FSA	20	22	20	17	15	14	11	11	5	6
FCO ⁽¹⁴⁾	-	-	-	-	-	-	-	6	3	*
DfES ⁽⁹⁾⁽¹⁶⁾	93	52	59	100	73	-	-	-	-	-
BERR (ex DIUS and Launch Investment) ⁽³⁾	-	-	-	-	-	1	1	-	-	-
DTI (ex OST and Launch Investment) ⁽³⁾	331	255	275	243	204	-	-	-	-	-
BIS Science (formerly DIUS) ⁽³⁾	-	-	-	-	-	r 393	r 408	r 83	-	-
Net Launch Investment	150	215	-127	-158	-154	-154	-128	-r 57	-r 91	-108

Table 2.1: Net Government expenditure on R&D by departments (cash), UK, 2002-03 to 2011-12

		£ million									
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Total	Total	1,849	1,929	1,666	1,721	1,652	r 1,738	r 1,905	r 2,076	r 2,062	2,303
Defence											
MoD (18)	Development	2,218	1,609	1,552	1,645	1,492	1,505	1,406	1,177	r 1159	753
	Research	516	524	639	598	632	635	584	575	534	553
	Total	2,734	2,133	2,191	2,243	2,124	2,139	1,991	1,752	r 1,693	1,306
Indicative UK contribution to the EU R&D budget		440	390	325	365	374	374	593	r 668	647	629
GRAND TOTAL		8,519	8,260	8,267	9,021	9,119	r 9,199	r 9,699	r 10,039	r 9,905	9,689

Notes: Source: ONS Government R&D Survey
r revised
Figures for the departments may not add up to the grand total shown due to rounding, and those prior to 2002-03 are shown in Table A2.1.
1) In 2010-11, MRC's expenditure included the capital spend for the construction of a new building but this tailed off in 2011-12. In April 2007, CCLRC & PPARC merged to form Science & Technology Facilities Council (STFC). In 2011-12 STFC's subscription for ESA of £21.1m transferred to BIS space. The NERC reported a decrease in spending of £32.4m due to reduction in spend abroad and no longer contributing to ESA. BBSRC reported higher spending due to campus development at Babraham Institute and capital building works at IAH Pirbright.
2) AHRC was established in April 2005.
3) From July 2007, DTI and OST were renamed Business Enterprise and Regulatory Reform (BERR) and Department of Innovation and Skills (DIUS) respectively. In 2009, DIUS and BERR merged to form BIS. DIUS was renamed as BIS Science and BERR renamed as BIS. A number of departments previously reported under DIUS have been transferred to BIS. From 2010-11, BIS Science reported under BIS. From 2011-12 includes all UK subscription to European Space Agency (total £255.1m), and some budget transfers from Defra and DfT as well as for Met office which was moved out of MoD. BIS science programme spend has been restated back to 2007-08 so that it is now consistent with the HEFCE outturn.
4) In 2009-10 expenditure rose as some capital spend that was planned for 2010-11 was brought forward and the subsequent reduction in spend reflect this.
5) Where a single year PES settlement is known, this figure is carried forward to subsequent years. The resulting apparent reduction in projected Government spend is a result of the routine application of the GDP deflator and does not signify a real reduction in planned spending.
6) The decline in 2010 spend was due to Environment Agency and VLA having less in-house expenditure. CORE DEFRA purchased less from Higher Education. VLA reported decrease in expenditure as a result of Government funding, and EA reported reduced budget & reduction in FTEs.
7) The Department of Transport, Local Government and the Regions split in June 2002 to form Department for Transport (DfT) and Office of Deputy Prime Minister (ODPM). In 2010-11, sharper reduction in spending arose due to the Spending Review identifying savings, and the fall in 2011-12 was due to small decreases across eight departments within DfT.
8) Includes the following departments: HMRC, HMT, Forestry Commission, Ordnance Survey Research, GCHQ and Ofsted. Also, includes expenditure attributed to the Forestry Commission in 2002-03 of £11.2 million, in 2003-04 of £11 million and of £12 million from 2004-05 onwards. OFFA included from 2011-12.
9) From June 2007 DfES was renamed Department for Children, Schools and Families (DCSF). From May 2010 DCSF was replaced with Department for Education (DfE). In 2011-12, expenditure fell due to move to move to drive down spend across all budgets, and reflects Ministerial priorities.
10) In 2010-11, reduced expenditure was due to the abolition of Museums, Libraries and Arts Council.
11) All amounts from 2001-02 onwards include additional research taken on from the former DfEE as a result of the transition from DSS to DWP during that year. In 2011-12 spend and headcount down due to reduced research budget and departmental restructuring.
12) From 2006, Ministry of Justice figures are displayed separately and are no longer included under "Other departments"
13) NHS Wales included in WG from 2010/11. Museum Wales included from 2011/2012.
14) FCO figures are estimated. Previously their figures were included under the Home Office.
15) DECC was created in October 2008.
16) Decrease in 2001-02 (formation of the Department for Education and Skills) was due to the transfer of responsibility for employment to the Department for Work and Pensions and for employer related equal opportunities issues to the Department for Trade and Industry.
17) In 2011-12 new Department of the Environment included for the first time, and will be used as a base year going forward. No accurate back data available at present.
18) This table comprises elements from both the Operating Cost Statement and the Balance Sheet in the DRAc. Receipts are monies received by MOD & its Trading Funds for expenditure on R&D, for example from other government departments & private industry. This money is not necessarily spent on defence-related R&D. The sharp fall in 2011-12 net research expenditure was reported by the MOD's Defense Equipment & Support (DE&S) as a number of project teams have moved from development phase to manufacturing resulting in a tailing off of their spend.

Table 2.2: Net Government expenditure on R&D by departments (in real terms), 2002-03 to 2011-12

	£ million (base year 2011-12)									
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Research Councils										
EPSRC	595	492	566	637	722	760	782	792	819	807
MRC ⁽¹⁾	444	438	443	480	529	542	620	666	693	672
STFC ⁽¹⁾	-	-	-	-	-	600	622	630	567	535
BBSRC ⁽¹⁾	298	324	325	369	408	404	409	454	430	472
NERC ⁽¹⁾	242	337	349	419	394	384	406	457	451	407
ESRC	92	101	116	134	150	162	169	178	181	173
AHRC ⁽¹⁾	-	-	-	67	79	94	97	91	91	95
Pensions/Other	34	34	47	17	19	27	77	39	35	34
OST - DTI ⁽¹⁾	302	470	420	580	464	-	-	-	-	-
PPARC ⁽¹⁾	309	330	348	385	369	-	-	-	-	-
CCLRC ⁽¹⁾	3	75	76	97	103	-	-	-	-	-
Total	2,319	2,602	2,689	3,185	3,237	2,972	3,181	3,307	3,269	3,194
Higher Education Funding Councils ⁽¹⁾										
Total	2,018	2,021	2,127	2,223	2,341	2,447	2,374	2,515	2,352	2,257
Civil Departments										
DH (including NHS) ⁽¹⁾	638	720	741	724	755	780	838	888	901	904
NHS	572	647	677	672	699	724	778	836	865	866
BIS (formerly BERR) ⁽¹⁾	-	-	-	-	-	-	-	279	417	645
DFID (formerly ODA)	239	261	254	305	277	146	159	237	213	226
SG (formerly SE)	143	156	155	158	148	150	150	162	170	160
DEFRA ⁽¹⁾	215	220	225	231	218	208	199	191	157	157
NI departments ⁽¹⁾	21	25	24	24	24	24	23	22	20	78
DCMS (formerly DNH)	23	18	18	27	41	42	50	48	48	42
DECC ⁽¹⁾	-	-	-	-	-	-	28	26	36	39
DfT ⁽¹⁾	59	71	57	58	64	68	64	71	54	34
Other departments ⁽¹⁾	30	37	33	29	33	40	39	35	30	30
HO	71	58	68	84	57	46	47	46	43	24
DWP (including DSS) ⁽¹⁾	19	22	21	21	20	18	20	36	29	20
DfE ⁽¹⁾	-	-	-	-	-	39	35	32	28	13
HSE	20	17	29	21	16	13	13	13	12	10
WG (formerly WO) ⁽¹⁾	43	38	37	38	11	13	11	11	9	8
DCLG (formerly ODPM) ⁽¹⁾	34	37	34	31	33	27	29	30	16	7
MOJ ⁽¹⁾	-	-	-	-	2	11	13	10	7	7
FSA	25	27	24	19	17	16	12	11	5	6
FCO ⁽¹⁾	-	-	-	-	-	-	-	6	3	*
DfES ⁽¹⁾	116	63	70	116	82	-	-	-	-	-
BERR (ex DIUS and Launch Investment) ⁽¹⁾	-	-	-	-	-	1	1	-	-	-

Table 2.2: Net Government expenditure on R&D by departments (in real terms), 2002-03 to 2011-12

		£ million (base year 2011-12)									
		2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
	DTI (ex OST and Launch Investment) ⁽¹⁾	411	310	324	280	229	-	-	-	-	-
	BIS Science (formerly DIUS) ⁽¹⁾	-	-	-	-	-	430	435	87	-	-
	Net Launch Investment	186	261	-150	-182	-173	-168	-137	-60	-93	-108
Total	Total	2,294	2,342	1,964	1,984	1,855	1,904	2,031	2,181	2,106	2,303
Defence MoD ⁽¹⁾	Development	2,752	1,953	1,830	1,897	1,675	1,648	1,499	1,236	1,184	753
	Research	640	636	753	689	710	695	623	604	546	553
	Total	3,392	2,589	2,584	2,586	2,384	2,343	2,122	1,840	1,729	1,306
	Indicative UK contribution to the EU R&D budget	545	474	383	421	420	410	632	702	660	629
	GRAND TOTAL	10,569	10,026	9,748	10,399	10,237	10,075	10,341	10,545	10,117	9,689

Notes:

All figures have been rebased to 2011-12 prices, and those prior to 2002-03 are shown in Table A2.2.

1. See notes on Table 2.1

2. Implied deflators

Source: ONS Government R&D Survey

	80.6	82.4	84.8	86.8	89.1	91.3	93.8	95.2	97.9	100
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Table 2.3: Net Government R&D expenditure by primary purpose and department,
UK, 2011-12 ⁽¹⁾

		£ million				
		General support pp A	Government services pp B	Policy support pp C	Technology support pp D	Total
Research Councils						
	EPSRC	598	-	-	208	807
	MRC	573	60	9	29	672
	STFC	437	-	-	98	535
	BBSRC	463	-	-	8	472
	NERC	291	7	80	30	407
	ESRC	141	22	5	6	173
	AHRC	95	-	-	-	95
	Total	2,598	89	94	380	3,160
Higher Education Funding Councils		2,257	-	-	-	2,257
Civil Departments						
	DH (includes NHS)	867	2	35	1	904
	NHS	866	-	-	-	866
	BIS (formerly BERR) ⁽²⁾	85	-	9	443	538
	DFID (formerly ODA)	-	-	226	-	226
	SG (formerly SE)	70	5	45	39	160
	DEFRA	10	29	118	-	157
	NI departments	9	1	68	-	78
	DCMS (formerly DNH)	22	10	7	3	42
	DECC	-	6	29	4	39
	DfT	*	1	5	29	34
	Other departments	*	7	8	15	30
	HO	-	14	10	-	24
	DWP (formerly DSS)	-	-	20	-	20
	DfE	-	-	13	-	13
	HSE	-	-	10	-	10
	WG (formerly WO and WAG)	3	1	4	-	8
	DCLG (formerly ODPM)	-	-	7	1	7
	MOJ	-	3	4	-	7
	FSA	-	-	6	-	6
	FCO ⁽³⁾	-	-	*	-	*
	Total	1,067	78	624	534	2,303
Defence	MOD	-	1,306	-	-	1,306
TOTAL GOVERNMENT		5,922	1,472	718	914	9,026

Notes:

Source: ONS Government R&D Survey

1) For the purpose of this analysis Research Councils expenditure for Pensions/Other costs have been excluded.

2) From 2010 BIS Science is included under BIS

3) FCO figures are too small to display.

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Table 2.4: Government funding of net R&D by socio-economic objectives
- percentage share

	2007-08	2008-09	2009-10	2010-11	2011-12
Agriculture	2.9	2.8	3.6	3.3	3.9
Industrial production and technology	0.1	0.7	1.6	0.7	0.2
Energy	0.6	0.8	0.6	0.8	0.9
Transport, telecommunication, other infrastructure	1.3	1.4	1.4	1.2	1.9
Environment	2.5	2.9	3.0	3.0	3.0
Health	16.7	17.9	19.4	20.5	21.3
Education	0.7	0.6	0.6	0.5	0.4
Exploration and exploitation of the earth	2.6	2.8	3.0	3.1	3.4
General advancement of knowledge: R&D financed from General University Funds	25.3	24.5	25.6	24.9	24.9
Exploration and exploitation of space	2.0	2.3	2.0	1.7	2.9
Defence	24.4	22.0	18.8	18.4	14.6
Culture, recreation, religion and mass media	1.7	1.9	1.8	1.9	1.9
Political and social systems, structures and processes	1.5	1.8	1.8	1.7	1.4
General advancement of knowledge: R&D financed from other sources	17.7	17.9	16.8	18.2	19.3
Total	100	100	100	100	100
TOTAL (£ million)	8,825	9,107	9,371	9,259	9,060

Source: ONS Government R&D Survey

Note: Figures prior to 2007 are not comparable due to changes in NABS codes by Eurostat

Table 2.5: Aggregate destination of total Government R&D expenditure ⁽¹⁾, 2002-03 to 2011-12

	£ million in cash terms									
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Civil R&D										
Total Gross Expenditure	5,938	6,276	6,338	7,035	7,253	r 7,363	r 7,779	r 8,424	r 8,356	8,513
Within government departments ⁽²⁾	1,685	1,833	1,960	2,077	2,106	2,173	2,260	2,376	r 2,432	2,381
Higher Education Institutions	3,097	3,214	3,384	3,863	4,132	r 4,131	r 4,361	r 4,657	r 4,604	4,639
Private Industry/Public corporations	719	737	427	416	372	428	430	609	r 575	569
Overseas	310	356	397	476	446	429	500	493	485	578
Others	127	137	169	203	197	203	228	290	261	345
Less receipts	593	539	587	623	632	678	663	805	r 790	759
Total Net expenditure	5,345	5,737	5,751	6,413	6,621	r 6,686	r 7,116	r 7,619	r 7,566	7,754
Defence R&D										
Total Gross Expenditure	2,790	2,200	2,260	2,318	2,212	2,220	2,074	1,839	r 1,782	1,348
Within government departments ⁽²⁾	288	380	362	371	361	279	269	293	r 227	163
Higher Education Institutions	8	10	16	5	13	5	5	5	4	3
Private Industry/Public corporations	2,477	1,590	1,631	1,809	1,752	1,652	1,353	1,118	r 1,359	1,042
Overseas	17	219	251	132	85	276	446	423	191	140
Others	-	-	-	-	-	8	1	-	1	-
Less receipts	56	68	69	75	88	81	83	87	89	42
Total Net expenditure	2,734	2,133	2,191	2,243	2,124	2,139	1,991	1,752	r 1,693	1,306
Total R&D										
Total Gross Expenditure	8,728	8,476	8,598	9,353	9,465	r 9,584	r 9,852	r 10,263	r 10,138	9,861
Within government departments ⁽²⁾	1,974	2,213	2,322	2,448	2,467	2,452	2,530	2,668	r 2,658	2,544
Higher Education Institutions	3,105	3,224	3,400	3,868	4,146	r 4,136	r 4,366	r 4,661	r 4,608	4,642
Private Industry/Public corporations	3,196	2,327	2,058	2,225	2,124	2,080	1,783	1,727	r 1,934	1,612
Overseas	327	575	648	609	531	705	946	916	676	718
Others	127	137	170	203	197	211	228	290	262	345
Less receipts	649	606	656	697	720	759	746	892	r 879	801
Total Net expenditure	8,079	7,869	7,942	8,656	8,745	r 8,825	r 9,107	r 9,371	r 9,259	9,060

Notes:

Figures for the departments may not add up to the grand total shown due to rounding, and those prior to 2002-03 are shown in Table A2.3.

1 Payments to other government departments and Research Councils are excluded here to avoid double counting. The expenditure represented by these payments is shown in the aggregated figures for expenditure within and outside government departments. These payments are also excluded from the figure for receipts.

2 Includes Research Council Institutes and Local Authorities.

Table 2.6: Analysis of net Government R&D expenditure by Frascati type of research activity, UK, ^(1,2,3), 2002-03 to 2011-1

	£ million									
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Research Councils										
Basic:										
- pure	567	756	766	1,019	953	739	817	808	790	707
- orientated	665	689	747	853	980	1,010	1,114	1,206	1,218	1,211
Applied:										
- strategic	513	554	594	686	755	733	754	838	896	914
- specific	80	89	116	166	157	167	186	206	213	275
Experimental development	16	26	19	24	21	40	41	53	50	54
TOTAL	1,842	2,115	2,241	2,748	2,866	2,689	2,912	3,111	3,166	3,160
Civil Departments										
Basic:										
- pure	34	66	69	43	46	105	100	123	122	108
- orientated	52	76	77	46	39	82	216	138	100	163
Applied:										
- strategic	754	760	787	890	831	670	620	669	697	680
- specific	882	937	629	616	641	794	896	1,084	801	1,022
Experimental development	127	89	104	126	95	87	73	61	344	329
TOTAL	1,849	1,929	1,666	1,721	1,652	1,738	1,905	2,076	2,062	2,303
Defence										
Basic:										
- pure	-	-	-	-	-	-	-	-	-	-
- orientated	-	-	-	-	-	-	-	-	-	-
Applied:										
- strategic	127	129	75	30	35	21	13	29	21	17
- specific	389	395	564	568	598	614	571	546	513	536
Experimental development	2,218	1,609	1,552	1,645	1,492	1,505	1,406	1,177	1,159	753
TOTAL	2,734	2,133	2,191	2,243	2,124	2,139	1,991	1,752	1,693	1,306

Note:

1 For the purpose of this analysis Research Councils expenditure for Pensions/Other costs have been excluded

2 For the purpose of this analysis Higher Education Funding Councils are excluded.

3 Figures include NHS.

Source: ONS Government R&D Survey

Table 3.1: Qualified scientists and engineers in the labour force, GB, Q4 2011

[revised]

	000's			Percentage holding:		
	All	With HE Qual (1)	Science or Engineering HE Qual (2)	No HE Qual (3)	With HE Qual (1)	Science or Engineering HE Qual (2)
Persons						
Population aged 16-64	39,028	9,608	4,137	75	25	11
inactive	8,941	1,211	523	86	14	6
economically active	30,087	8,397	3,615	72	28	12
employed	27,551	8,013	3,484	71	29	13
unemployed (4)	2,536	384	130	85	15	5
Occupation of those employed (5):						
All occupations (6)	27,551	8,013	3,484	71	29	13
Managers and Senior Officials	2,705	994	403	63	37	15
Professional occupations	5,249	3,736	1,991	29	71	38
Associate Professional and Technical	3,856	1,567	535	59	41	14
Administrative and Secretarial	3,088	607	178	80	20	6
Skilled Trades Occupations	2,994	196	76	93	7	3
Personal Service Occupations	2,522	289	126	89	11	5
Sales and Customer Service Occupations	2,257	287	86	87	13	4
Process, Plant and Machine Operatives	1,733	87	25	95	5	1
Elementary Occupations	3,082	242	61	92	8	2

Notes:

Figures are not seasonally adjusted.

1 People who have obtained a Higher, First or Other degree, NVQ level 5, Level 8 Diploma, Certificate or Award, Level 7 Diploma or Certificate.

2 People who have obtained a HE qualification in a science or engineering subject. These subjects broadly consist of Medicine, Medical related subjects, Biological sciences, Agricultural Sciences, Physical/environmental sciences, Mathematical science & computing, Engineering, Technology, Architecture and related studies and Social sciences.

3 Nil returns have been included in the No HE Qualifications category.

4 Unemployed as defined by the International Labour Organisation.

5 Occupation is based on SOC 2010.

6 Includes people who did not state their occupations.

Source: ONS - Labour Force Survey

Table 3.2: Qualified scientists and engineers by gender in the labour force, GB, Q4 2011

	000's			Percentage holding:		
	All	With HE Qual (1)	Science or Engineering HE Qual (2)	All	With HE Qual (1)	Science or Engineering HE Qual (2)
Men						
Population aged 16-64	19,439	4,807	2,142	75	25	11
inactive	3,286	445	200	86	14	6
economically active	16,153	4,361	1,941	73	27	12
employed	14,699	4,164	1,865	72	28	13
unemployed (4)	1,454	198	77	86	14	5
Women						
Population aged 16-64	19,589	4,801	1,996	75	25	10
inactive	5,655	766	323	86	14	6
economically active	13,934	4,035	1,673	71	29	12
employed	12,853	3,849	1,620	70	30	13
unemployed (4)	1,081	186	53	83	17	5

Notes - see Table 3.1 above

Source: ONS - Labour Force Survey

Table A1.1: Net Government expenditure on SET by departments (cash), 1986-87 to 2001-02

	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
	£ million															
Research Councils																
EPSRC	-	-	-	-	-	-	-	-	369	369	378	387	374	401	416	478
MRC	128	140	150	176	186	203	228	255	271	278	282	282	277	305	316	348
NERC	-	-	-	-	-	-	-	-	143	180	180	188	186	196	212	214
BBSRC ⁽¹⁾	70	73	92	115	135	123	130	140	146	168	157	160	168	167	179	175
ESRC	24	25	27	32	37	36	46	53	59	62	64	65	68	71	70	73
Pensions/Other ⁽²⁾	-	-	-	-	-	-	-	-	31	8	10	26	13	21	26	27
OST - DTI ⁽³⁾	-	-	-	-	-	-	20	21	24	25	27	28	43	45	89	167
AFRC	57	55	61	74	89	97	105	109	-	-	-	-	-	-	-	-
SERC	316	358	368	406	443	456	523	584	-	-	-	-	-	-	-	-
PPARC ⁽⁴⁾	-	-	-	-	-	-	-	-	180	203	214	196	205	185	205	214
CCLRC ⁽⁵⁾	-	-	-	-	-	-	-	-	-	2	2	-	-	2	2	10
Total ⁽⁶⁾	596	650	697	803	890	915	1,051	1,163	1,223	1,295	1,312	1,331	1,334	1,394	1,514	1,707
Higher Education Funding Councils																
HE Funding Council (UK)	-	-	-	-	-	-	963	968	1,017	1,018	1,028	1,033	1,085	1,157	1,276	1,474
UFC and PCFC	720	760	830	830	863	950	-	-	-	-	-	-	-	-	-	-
Total ⁽⁶⁾	720	760	830	830	863	950	963	968	1,017	1,018	1,028	1,033	1,085	1,157	1,276	1,474
Civil Departments																
DH (including NHS) ⁽⁷⁾	-	-	51	59	72	59	55	62	60	404	470	460	463	473	478	505
NHS	-	-	-	-	-	-	-	-	-	347	408	401	403	410	423	445
DFID (formerly ODA) ⁽⁸⁾	27	33	34	36	47	67	102	131	131	132	108	112	104	148	173	147
SG (formerly SE)	57	55	60	63	66	71	74	77	78	78	79	73	72	123	139	143
DEFRA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	227
NI departments ⁽¹²⁾	17	17	18	21	22	23	25	27	26	25	24	24	29	28	29	19
DCMS (formerly DNH)	-	-	-	-	-	-	15	12	11	11	11	10	10	11	11	11
Other departments ⁽¹⁰⁾	29	24	26	26	26	28	15	22	24	17	17	22	23	25	27	30
HO ⁽⁹⁾	13	14	14	15	15	17	20	25	17	17	15	18	21	28	38	40
DSS/DWP ⁽¹¹⁾	-	-	1	1	2	3	3	4	5	5	5	4	4	5	5	16
HSE	5	8	10	9	13	21	27	28	26	28	28	26	22	20	19	20
WG (formerly WO) ⁽¹³⁾	4	2	2	2	2	3	1	3	3	3	2	18	20	19	25	37
FSA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	20
MAFF ⁽¹⁴⁾	157	141	148	146	150	152	168	154	149	151	139	142	141	136	119	-
DES/DFE	69	105	74	75	88	53	48	27	29	-	-	-	-	-	-	-
ED	2	2	2	3	54	60	54	59	59	-	-	-	-	-	-	-
DfEE ⁽¹⁵⁾	-	-	-	-	-	-	-	-	-	100	98	68	104	124	-	-
DfES ⁽¹⁶⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	133	96
MSC/TA	18	24	45	45	-	-	-	-	-	-	-	-	-	-	-	-
DOE	60	63	64	71	77	88	105	111	116	117	-	-	-	-	-	-
DOT	25	26	28	29	31	37	40	39	38	38	-	-	-	-	-	-
DETR ⁽¹⁷⁾	-	-	-	-	-	-	-	-	-	-	154	154	154	162	189	-
DTLR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78
DHSS	49	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DTI (exc OST and Launch Investment) ⁽³⁾	366	391	335	309	324	335	503	463	388	377	356	343	330	335	354	366

Table A1.1: Net Government expenditure on SET by departments (cash), 1986-87 to 2001-02

		£ million															
		1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Defence	DEn ⁽¹⁸⁾	198	183	211	201	194	147	-	-	-	-	-	-	-	-	-	-
	BIS Science (formerly DIUS)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Net Launch Investment ⁽¹⁹⁾	96	27	76	91	89	-5	-41	-54	-43	-35	-61	-119	-126	-135	-99	22
	Total	1,191	1,163	1,199	1,203	1,271	1,158	1,213	1,190	1,117	1,468	1,445	1,354	1,373	1,502	1,502	1,664
MoD⁽²⁰⁾	Development	1,778	1,760	1,737	1,856	1,926	2,091	1,568	1,624	1,366	1,394	1,562	1,750	1,581	1,721	1,721	1,673
	Research	408	396	386	448	412	466	513	654	665	675	672	564	560	552	552	566
	Total	2,186	2,156	2,123	2,302	2,337	2,557	2,081	2,279	2,032	2,070	2,234	2,314	2,140	2,272	2,272	2,240
Indicative UK contribution to the EU R&D budget		95	110	130	172	208	190	259	292	286	338	357	339	375	328	328	399
GRAND TOTAL		4,788	4,839	4,979	5,310	5,569	5,769	5,567	5,891	5,674	6,188	6,375	6,371	6,306	6,652	6,652	7,093

Notes:

Source: ONS - Labour Force Survey

Figures for the departments may not add up to the grand total shown due to rounding, and those after 2001-02 are shown in Table 1.1.

1) Excludes £16.1 million receipts from the sale of the Plant Breeding Institute, 1994-95

2) In 1994-95 Research Council Pension Scheme (RCPS) costs were met centrally. The 1995-96 transfer from central provision to the Councils allowed the RCPS to be funded principally from Councils' direct contributions of a percentage of salary costs. Shortfalls are still met centrally. From 1997-98 restructuring costs are included.

3) Excludes OSI administration costs, which are included in DTI from 1995-96 onwards. OSI expenditure is mostly in support of the Royal Society and the Royal Academy of Engineering, which before 1992-93 had been included in DFE (now DES), and includes over the CSR, SR2000 and SR2002 plan periods the funds for Joint Infrastructure Fund, Science Research Investment Fund, CCLRC for Diamond, OSI Initiatives, Foresight LINK Awards and other science programmes not yet allocated to the Research Councils.

4) With effect from 2002-03, non cash costs are included.

5) Figures for 1995-96 and 1996-97 relate to restructuring costs only. In 1997-98 and 1998-99 these costs are included in Pensions/Other. From 1999-2000 onwards the net expenditure relates to research and development.

6) Figures include the phased transfer of £156 million between the HEFCs and RCs over the period 1992-93 to 1994-95.

7) Where a single year PES settlement is known, this figure is carried forward to subsequent years. The resulting apparent reduction in projected Government spend is a result of the routine application of the GDP deflator and does not signify a real reduction in planned spending.

8) The former Natural Resources Institute technology transfer funding, £11.8 million in 1995-96, cannot be disaggregated. This has been included within the Natural Resources Research Division R&D spend from 1996-97 onwards.

9) The decrease in expenditure in the Home Office from 1993-94 reflects a reassessment of R&D in the Police Scientific Development Branch.

10) Includes Ministry of Justice figures, HMRC, HMT, Forestry Commission, Ordnance Survey Research, GCHQ and Ofsted.

11) In 1988 the Department of Social Security was created when DHSS was split. In 2001 the Department for Work and Pensions was formed from, absorbing the employment functions which had previously been the responsibility of the Department for Education and Employment since the dissolution of the Department of Employment in 1995. All amounts from 2001-02 onwards include additional research taken on from the former DfEE as a result of the transition from DSS to DWP during that year.

12) Prior to 1997-98, figures shown relate solely to departmental expenditure. In 1997-98, it was intended that expenditure by NDPBs should be included. Due to delays in the establishment of the Research and Development Office (RDO), this expenditure was not monitored, and the 1997-98 outturn figures shown relate solely to departmental expenditure. From 1998-99, figures relate to expenditure by the Department and RDO.

13) Increase from 1997-98 onwards is attributed to revised recording and funding arrangements for NHS based research rather than an increase in expenditure. Validated central reporting only available for the Assembly from 1999-00 onwards. Increase from 2001-02 onwards is partially attributed to the inclusion of expenditure and personnel from Assembly Sponsored Public Bodies (ASPBs). Increase in direct Assembly expenditure on SET between 2001-01 and 2001-02 is 4.8%.

14) MAFF funding transferred to the Food Standards Agency (FSA) on 1 April 2000.

15) In 1995, the Department for Education merged with the Department of Employment to become the Department for Education and Employment (DfEE).

16) After the 2001 general election, the employment functions were transferred to a newly created Department for Work and Pensions, with the DfEE becoming the Department for Education and Skills (DfES).

17) The Department of the Environment and the Department of Transport merged in June 1997 to form the Department of the Environment, Transport and the Regions. The Department of the Environment, Transport and the Regions split in May 2001 to form Department of Transport, Local Government and the Regions (DTLR) which also included Fire Directorate from the Home Office, and the Department for Environment, Food and Rural Affairs (DEFRA).

18) The Department of Energy merged with the Department of Trade and Industry in April 1992.

19) Net launch investment was positive when income received from investments was less than forecast and expenditure was more than the forecast.

20) The amendments made to the data from 1996/97 onwards are described in Defence Statistics Bulletin 6, which is available at www.dasa.mod.uk. On 1st July 2001, DERA was split into two organisations: the Defence Science & Technology Laboratory (Dstl) (about a quarter of DERA) staying as a Trading Fund within MOD, and QinetiQ, the remainder, becoming a private (extramural) company.

Table A1.2: Net Government expenditure on SET by departments (in real terms), 1986-87 to 2001-02

£ million (base year 2010-11)

	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Research Councils																
EPSRC	-	-	-	-	-	-	-	-	540	525	522	523	495	523	539	607
MRC	272	281	282	312	306	314	345	379	397	396	390	382	367	397	409	442
BBSRC ⁽¹⁾	-	-	-	-	-	-	-	-	209	256	248	254	246	255	275	272
NERC	149	147	173	203	223	190	197	208	214	239	217	216	223	218	232	223
ESRC	50	50	51	56	60	55	70	79	86	88	88	88	91	93	91	93
Pensions/Other ⁽¹⁾	-	-	-	-	-	-	-	-	45	12	14	35	18	28	33	34
OST - DTI ⁽¹⁾	-	-	-	-	-	-	30	32	35	36	37	37	57	59	115	213
AFRC	121	110	115	131	147	150	160	162	-	-	-	-	-	-	-	-
SERC	669	718	693	718	731	707	793	866	-	-	-	-	-	-	-	-
PPARC ⁽¹⁾	-	-	-	-	-	-	-	-	263	288	295	265	272	241	266	273
CCLRC ⁽¹⁾	-	-	-	-	-	-	-	-	-	3	2	-	-	3	3	13
Total ⁽¹⁾	1,261	1,307	1,315	1,419	1,468	1,416	1,593	1,725	1,789	1,843	1,812	1,802	1,769	1,816	1,962	2,171
Higher Education Funding Councils																
HE Funding Council (UK)	-	-	-	-	-	-	1,460	1,437	1,487	1,448	1,419	1,398	1,439	1,508	1,654	1,874
UFC and PCFC	1,524	1,527	1,566	1,466	1,424	1,471	-	-	-	-	-	-	-	-	-	-
Total ⁽¹⁾	1,524	1,527	1,566	1,466	1,424	1,471	1,460	1,437	1,487	1,448	1,419	1,398	1,439	1,508	1,654	1,874
Civil Departments																
DH (including NHS) ⁽¹⁾	-	-	95	104	118	91	84	91	87	575	649	623	614	616	619	642
<i>NHS</i>	-	-	-	-	-	-	-	-	-	494	563	543	534	534	548	566
DFID (formerly ODA) ⁽¹⁾	57	65	65	64	78	104	155	194	191	188	149	152	138	193	224	186
SG (formerly SE)	121	111	113	112	108	109	111	115	114	111	109	98	95	160	180	182
DEFRA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	289
<i>NI departments</i>	36	34	35	37	36	35	38	40	38	36	33	32	38	36	38	24
DCMS (formerly DNH)	-	-	-	-	-	-	22	17	17	16	15	13	14	14	14	14
Other departments ⁽¹⁾	60	49	49	46	42	43	22	33	35	24	23	30	31	33	35	38
HO ⁽¹⁾	28	29	27	27	25	27	30	36	24	24	21	24	28	36	49	51
DWP (formerly DSS)	-	-	2	2	3	4	5	6	7	7	7	5	6	7	7	21
HSE	11	16	19	16	21	33	41	42	37	40	39	36	29	25	25	25
WG (formerly WAG & WO)	7	4	4	4	4	4	1	4	4	4	3	24	26	25	33	46
FSA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	25
MAFF ⁽¹⁾	332	283	279	258	248	236	255	229	218	214	192	193	187	177	154	-
DES/DFE	146	212	139	133	145	82	73	40	43	-	-	-	-	-	-	-
ED	3	4	4	5	88	93	81	88	86	-	-	-	-	-	-	-
DfEE ⁽¹⁾	-	-	-	-	-	-	-	-	-	142	135	92	139	162	-	-
DfES ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	173	123
DOE	127	127	121	126	127	137	159	165	170	166	-	-	-	-	-	-
DOT	52	53	52	51	51	57	60	58	56	54	-	-	-	-	-	-
DETR ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	213	208	205	211	245	-
DTLR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99
DHSS	105	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DTI (ex OST and Launch Investment) ⁽¹⁾	775	785	632	546	534	519	762	687	568	537	492	465	438	437	459	466
DEn ⁽¹⁾	418	367	399	355	321	227	-	-	-	-	-	-	-	-	-	-
Launch Investment ⁽¹⁾	203	54	143	161	147	-7	-61	-80	-63	-49	-85	-161	-167	-175	-128	28
Total	2,520	2,336	2,261	2,126	2,096	1,793	1,838	1,765	1,633	2,089	1,995	1,833	1,821	1,957	2,157	2,259
Defence																

Table A1.2: Net Government expenditure on SET by departments (in real terms), 1986-87 to 2001-02

		£ million (base year 2010-11)															
		1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
MoD ⁽¹⁾	Development	3,763	3,536	3,276	3,279	3,176	3,238	2,376	2,410	1,998	1,984	2,157	2,369	2,097	2,242	2,168	1,908
	Research	863	796	728	792	679	722	777	970	973	961	928	764	743	719	734	708
	Total	4,626	4,331	4,004	4,067	3,854	3,959	3,153	3,380	2,971	2,946	3,085	3,133	2,838	2,960	2,903	2,616
Indicative UK contribution to the EU R&D budget		202	220	245	304	342	294	392	433	418	481	492	459	497	427	517	497
GRAND TOTAL		10,133	9,720	9,390	9,383	9,184	8,933	8,436	8,739	8,297	8,808	8,803	8,624	8,364	8,668	9,192	9,416

Notes:
 r revised
 Figures for the departments may not add up to the grand total shown due to rounding, and those after 2001-02 are shown in Table 1.2.
 1 See notes on Table A1.1
 Implied deflators

Source: ONS - Labour Force Survey

Implied deflators	47.3	49.8	53.0	56.6	60.6	64.6	66.0	67.4	68.4	70.3	72.4	73.9	75.4	76.7	77.2	78.6
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Table A2.1: Net Government expenditure on R&D by departments (cash), 1986-87 to 2001-02

	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93 ⁽⁶⁾	1993-94 ⁽⁶⁾	1994-95 ⁽⁶⁾	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
Research Councils															
EPSRC	-	-	-	-	-	-	-	-	344	345	357	363	351	376	395
MRC	128	140	149	176	186	203	227	255	267	275	278	281	276	304	315
BBSRC ⁽¹⁾	-	-	-	-	-	-	-	-	136	173	175	186	184	194	211
NERC	69	71	86	111	132	119	124	134	139	156	148	152	160	159	170
ESRC	20	22	24	28	33	33	43	49	55	55	58	59	64	66	64
Pensions/Other ⁽²⁾	-	-	-	-	-	-	-	-	29	8	9	14	13	20	24
OST - DTI ⁽³⁾	-	-	-	-	-	-	20	21	24	25	27	28	28	32	73
AFRC	49	51	59	67	74	76	97	109	-	-	-	-	-	-	-
SERC	301	341	348	386	420	438	499	566	-	-	-	-	-	-	-
PPARC ⁽⁴⁾	-	-	-	-	-	-	-	-	180	202	211	196	205	185	205
CCLRC ⁽⁵⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
Total⁽⁶⁾	566	624	665	767	845	869	1,009	1,035	1,074	1,240	1,261	1,279	1,280	1,339	1,459
Higher Education Funding Councils															
HE Funding Council (UK)	720	760	830	830	863	950	-	-	-	-	-	-	-	-	-
UFC and PCFC	-	-	-	-	-	-	963	968	1,017	1,018	1,028	1,033	1,085	1,157	1,276
Total⁽⁶⁾	720	760	830	830	863	950	963	968	1,017	1,018	1,028	1,033	1,085	1,157	1,276
Civil Departments															
DH (including NHS) ⁽⁷⁾	-	-	50	58	71	59	55	61	59	403	470	460	463	473	478
NHS	-	-	-	-	-	-	-	-	-	347	408	401	403	410	423
DFID (formerly ODA) ⁽⁸⁾	27	33	34	36	47	56	87	116	111	118	106	112	104	148	173
SG (formerly SE)	53	52	55	59	62	68	71	74	75	74	76	68	68	103	105
DEFRA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NI departments ⁽¹²⁾	17	17	18	20	21	22	24	26	25	24	23	23	28	26	29
DCMS (formerly DNH)	-	-	-	-	-	-	15	12	11	11	11	10	10	11	11
Other departments ⁽¹⁰⁾	29	24	26	26	26	28	15	22	24	17	17	22	23	25	27
HO ⁽⁹⁾	13	14	14	15	15	17	20	25	17	17	15	18	21	28	38
DSS/DWP ⁽¹¹⁾	-	-	1	1	2	3	3	4	5	5	5	4	4	5	5
HSE	5	5	6	6	9	17	22	25	23	25	25	23	19	17	16
WAG (formerly WO) ⁽¹³⁾	4	2	2	2	2	3	1	3	3	3	2	18	20	19	21
FSA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23
MAFF ⁽¹⁴⁾	118	114	115	112	119	122	133	135	137	140	137	141	140	134	118
DES/DFE	69	105	73	75	88	53	45	24	26	-	-	-	-	-	-
ED	2	2	2	3	54	60	54	59	59	-	-	-	-	-	-
DfEE ⁽¹⁵⁾	-	-	-	-	-	-	-	-	-	96	94	68	104	124	-
DfES ⁽¹⁶⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	133
MSC/TA	18	24	45	45	-	-	-	-	-	-	-	-	-	-	-
DOE	59	62	63	70	76	88	92	97	101	95	-	-	-	-	-
DOT	25	26	27	29	31	36	40	39	38	38	-	-	-	-	-
DETR ⁽¹⁷⁾	-	-	-	-	-	-	-	-	-	-	133	133	132	138	141
DTLR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DHSS	49	47	-	-	-	-	-	-	-	-	-	-	-	-	-
DTI (ex OST and Launch Investment) ⁽³⁾	267	298	239	219	220	243	391	354	308	284	274	304	235	235	255
DEn ⁽¹⁸⁾	192	176	190	166	153	126	-	-	-	-	-	-	-	-	-
Net Launch Investment ⁽¹⁹⁾	96	27	76	91	89	-5	-41	-54	-43	-35	-61	-119	-126	-135	-99

£

Table A2.1: Net Government expenditure on R&D by departments (cash), 1986-87 to 2001-02

		£														
		1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93 ⁽⁶⁾	1993-94 ⁽⁶⁾	1994-95 ⁽⁶⁾	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
Total		1,044	1,029	1,038	1,036	1,086	996	1,026	1,022	979	1,316	1,328	1,283	1,246	1,351	1,474
Defence																
MoD⁽²⁰⁾	Development	1,778	1,760	1,737	1,856	1,926	2,091	1,568	1,624	1,366	1,394	1,562	1,750	1,581	1,721	1,673
	Research	408	396	386	448	412	466	513	654	665	675	672	564	560	552	566
	Total	2,186	2,156	2,123	2,302	2,337	2,557	2,081	2,279	2,032	2,070	2,234	2,314	2,140	2,272	2,240
Indicative UK contribution to the EU R&D budget		95	110	130	172	208	190	259	292	286	338	357	339	375	328	399
GRAND TOTAL		4,611	4,678	4,786	5,106	5,338	5,561	5,336	5,694	5,486	5,980	6,206	6,247	6,126	6,447	6,848

Notes:

Source: ONS - Labour Force

Figures for the departments may not add up to the grand total shown due to rounding, and those after 2001-02 are shown in Table 2.1.

1) Excludes £16.1 million receipts from the sale of the Plant Breeding Institute, 1994-95

2) In 1994-95 Research Council Pension Scheme (RCPS) costs were met centrally. The 1995-96 transfer from central provision to the Councils allowed the RCPS to be funded principally from Councils' direct contributions of a percentage of salary costs. Shortfalls are still met centrally. From 1997-98 restructuring costs are included.

3) Excludes OSI administration costs, which are included in DTI from 1995-96 onwards. OSI expenditure is mostly in support of the Royal Society and the Royal Academy of Engineering, which before 1992-93 had been included in DFE (now DES), and includes over the CSR, SR2000 and SR2002 plan periods the funds for Joint Infrastructure Fund, Science Research Investment Fund, CCLRC for Diamond, OSI Initiatives, Foresight LINK Awards and other science programmes not yet allocated to the Research Councils.

4) With effect from 2002-03, non cash costs are included.

5) Figures for 1995-96 and 1996-97 relate to restructuring costs only. In 1997-98 and 1998-99 these costs are included in Pensions/Other. From 1999-2000 onwards the net expenditure relates to research and development.

6) Figures include the phased transfer of £156 million between the HEFCs and RCs over the period 1992-93 to 1994-95.

7) Where a single year PES settlement is known, this figure is carried forward to subsequent years. The resulting apparent reduction in projected Government spend is a result of the routine application of the GDP deflator and does not signify a real reduction in planned spending.

8) The former Natural Resources Institute technology transfer funding, £11.8 million in 1995-96, cannot be disaggregated. This has been included within the Natural Resources Research Division R&D spend from 1996-97 onwards.

9) The decrease in expenditure in the Home Office from 1993-94 reflects a reassessment of R&D in the Police Scientific Development Branch.

10) Includes Ministry of Justice figures, HMRC, HMT, Forestry Commission, Ordnance Survey Research, GCHQ and Ofsted.

Education and Employment since the dissolution of the Department of Employment in 1995. All amounts from 2001-02 onwards include additional research taken on from the former DfEE as a result of the transition from DSS to DWP during that year.

12) Prior to 1997-98, figures shown relate solely to departmental expenditure. In 1997-98, it was intended that expenditure by NDPBs should be included. Due to delays in the establishment of the Research and Development Office (RDO), this expenditure was not monitored, and the 1997-98 outturn figures shown relate solely to departmental expenditure. From 1998-99, figures relate to expenditure by the Department and RDO.

13) Increase from 1997-98 onwards is attributed to revised recording and funding arrangements for NHS based research rather than an increase in expenditure. Validated central reporting only available for the Assembly from 1999-00 onwards. Increase from 2001-02 onwards is partially attributed to the inclusion of expenditure and personnel from Assembly Sponsored Public Bodies (ASPBs). Increase in direct Assembly expenditure on SET between 2001-01 and 2001-02 is 4.8%.

14) MAFF funding transferred to the Food Standards Agency (FSA) on 1 April 2000.

15) In 1995, the Department for Education merged with the Department of Employment to become the Department for Education and Employment (DfEE).

16) After the 2001 general election, the employment functions were transferred to a newly created Department for Work and Pensions, with the DfEE becoming the Department for Education and Skills (DfES).

17) The Department of the Environment and the Department of Transport merged in June 1997 to form the Department of the Environment, Transport and the Regions. The Department of the Environment, Transport and the Regions split in May 2001 to form Department of Transport, Local Government and the Regions (DTLR) which also included Fire Directorate from the Home Office, and the Department for Environment, Food and Rural Affairs (DEFRA).

18) The Department of Energy merged with the Department of Trade and Industry in April 1992.

19) Net launch investment was positive when income received from investments was less than forecast and expenditure was more than the forecast.

20) The amendments made to the data from 1996/97 onwards are described in Defence Statistics Bulletin 6, which is available at www.dasa.mod.uk. On 1st July 2001, DERA was split into two organisations: the Defence Science & Technology Laboratory (Dstl) (about a quarter of DERA) staying as a Trading Fund within MOD, and QinetiQ, the remainder, becoming a private (extramural) company.

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Table A2.2: Net Government expenditure on R&D by departments (in real terms), 1986-87 to 2001-02

£ million (base year 2011-12)

	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93 ⁽¹⁾	1993-94 ⁽¹⁾	1994-95 ⁽¹⁾	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Research Councils																
EPSRC	-	-	-	-	-	-	-	-	503	491	492	491	465	490	512	577
MRC	270	280	281	311	306	314	344	378	390	392	383	381	366	396	408	441
NERC	-	-	-	-	-	-	-	-	199	246	242	252	244	253	273	270
BBSRC ⁽¹⁾	145	142	162	196	217	185	187	199	204	222	204	206	212	208	220	211
ESRC	42	43	44	49	55	51	65	73	80	79	80	80	84	86	83	87
Pensions/Other ⁽¹⁾	-	-	-	-	-	-	-	-	43	11	13	19	17	26	32	33
OST - DTI ⁽¹⁾	-	-	-	-	-	-	30	32	35	36	37	37	38	42	95	192
AFRC	103	103	111	119	122	118	146	162	-	-	-	-	-	-	-	-
SERC	638	684	657	681	693	679	757	840	-	-	-	-	-	-	-	-
PPARC ⁽¹⁾	-	-	-	-	-	-	-	-	263	287	291	265	272	241	266	273
CCLRC ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	13
Total⁽¹⁾	1,199	1,254	1,255	1,356	1,393	1,346	1,529	1,535	1,570	1,764	1,742	1,731	1,698	1,744	1,891	2,096
Higher Education Funding Councils																
HE Funding Council (UK)	-	-	-	-	-	-	1,460	1,437	1,487	1,448	1,419	1,398	1,439	1,508	1,654	1,874
UFC and PCFC	1,524	1,527	1,566	1,466	1,424	1,471	-	-	-	-	-	-	-	-	-	-
Total⁽¹⁾	1,524	1,527	1,566	1,466	1,424	1,471	1,460	1,437	1,487	1,448	1,419	1,398	1,439	1,508	1,654	1,874
Civil Departments																
DH (including NHS) ⁽¹⁾	-	-	95	103	117	91	84	91	86	574	649	623	614	616	619	641
NHS	-	-	-	-	-	-	-	-	-	494	563	543	534	534	548	566
BIS (formerly BERR)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DFID (formerly ODA) ⁽¹⁾	57	65	65	64	78	87	131	172	163	168	147	152	138	193	224	186
SG (formerly SE)	113	104	104	104	103	105	107	110	110	106	105	92	90	134	136	146
DEFRA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	219
NI departments ⁽¹⁾	36	34	34	36	35	34	36	38	36	34	31	31	37	34	37	23
DCMS (formerly DNH)	-	-	-	-	-	-	22	17	17	15	15	13	14	14	14	14
Other departments ⁽¹⁾	60	48	49	46	42	43	22	32	35	24	23	30	31	33	35	38
HO ⁽¹⁾	28	29	27	27	25	27	30	36	24	24	20	24	28	36	49	51
DWP (formerly DSS) ⁽¹⁾	-	-	2	2	3	4	5	6	7	7	7	5	6	7	7	21
HSE	11	10	12	11	15	26	33	37	33	36	35	32	25	22	21	21
WAG (formerly WO) ⁽¹⁾	7	4	4	4	4	4	1	4	4	4	3	24	26	25	28	46
FSA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30	25
MAFF ⁽¹⁾	250	229	217	198	196	188	201	200	201	199	190	190	185	175	153	-
DES/DFE	146	212	138	133	145	82	68	36	38	-	-	-	-	-	-	-
ED	3	4	4	5	88	93	81	88	86	-	-	-	-	-	-	-
DfEE ⁽¹⁾	-	-	-	-	-	-	-	-	-	137	130	92	139	162	-	-
DFES ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	-	-	-	-	173	123
MSC/TA	39	48	85	80	-	-	-	-	-	-	-	-	-	-	-	-
DOE	125	125	119	124	125	136	139	143	147	135	-	-	-	-	-	-
DOT	52	53	51	51	50	56	60	58	56	54	-	-	-	-	-	-
DETR ⁽¹⁾	-	-	-	-	-	-	-	-	-	-	184	180	176	180	183	-
DTLR	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95
DHSS	105	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DTI (ex OST and Launch Investment) ⁽¹⁾	565	598	450	387	363	376	593	525	451	404	379	412	312	306	330	350
DEn ⁽¹⁾	407	354	359	293	252	196	-	-	-	-	-	-	-	-	-	-
Net Launch Investment ⁽¹⁾	203	54	143	161	147	-7	-61	-80	-63	-49	-85	-161	-167	-175	-128	28
Total	2,210	2,067	1,958	1,830	1,791	1,542	1,555	1,515	1,432	1,873	1,834	1,737	1,653	1,761	1,911	2,028

Table A2.2: Net Government expenditure on R&D by departments (in real terms), 1986-87 to 2001-02

		£ million (base year 2011-12)															
		1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93 ⁽¹⁾	1993-94 ⁽¹⁾	1994-95 ⁽¹⁾	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
Defence																	
MoD⁽¹⁾	Development	3,763	3,536	3,276	3,279	3,176	3,238	2,376	2,410	1,998	1,984	2,157	2,369	2,097	2,242	2,168	1,908
	Research	863	796	728	792	679	722	777	970	973	961	928	764	743	719	734	708
	Total	4,626	4,331	4,004	4,067	3,854	3,959	3,153	3,380	2,971	2,946	3,085	3,133	2,838	2,960	2,903	2,616
Indicative UK contribution to the EU R&D budget		202	220	245	304	342	294	392	433	418	481	492	459	497	427	517	497
GRAND TOTAL		9,758	9,397	9,026	9,021	8,803	8,610	8,087	8,446	8,022	8,511	8,570	8,456	8,125	8,400	8,875	9,111

Notes:

Figures for the departments may not add up to the grand total shown due to rounding, and those after 2001-02 are shown in Table 2.2.

¹ See notes on Table A2.1

Implied deflators	47.3	49.8	53.0	56.6	60.6	64.6	66.0	67.4	68.4	70.3	72.4	73.9	75.4	76.7	77.2	78.635
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Source: ONS - Labour Force Survey

Table A2.3: Aggregate destination of total Government R&D expenditure ⁽¹⁾, 1986-87 to 2001-02

	£ million in cash terms															
	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98 ⁽²⁾	1998-99 ⁽²⁾	1999-00 ⁽²⁾	2000-01 ⁽²⁾	2001-02
Civil R&D																
Total Gross Expenditure	2,466	2,479	2,619	2,747	2,948	3,000	3,166	3,302	3,355	3,732	3,797	4,041	4,127	4,384	4,748	5,323
Within government departments ⁽³⁾	577	602	677	745	809	845	960	1,020	1,016	1,329	1,299	1,489	1,475	1,522	1,576	1,628
Higher Education Institutions	1,025	1,136	1,195	1,239	1,408	1,503	1,478	1,569	1,768	1,788	1,817	1,847	1,924	2,123	2,370	2,745
Private Industry/Public corporations	559	427	428	426	435	366	363	309	234	249	308	343	376	391	410	580
Overseas	150	163	177	176	185	199	222	257	268	286	292	279	256	274	307	274
Others	155	151	143	161	112	86	144	147	68	79	81	83	95	75	82	96
Less receipts	136	67	87	115	155	186	169	179	186	159	181	447	515	537	539	606
Total Net expenditure⁽⁴⁾	2,330	2,412	2,533	2,632	2,793	2,814	2,997	3,124	3,169	3,572	3,616	3,594	3,611	3,847	4,209	4,717
Defence R&D																
Total Gross Expenditure	2,371	2,299	2,265	2,429	2,453	2,680	2,159	2,411	2,158	2,157	2,285	2,371	2,240	2,350	2,321	2,117
Within government departments ⁽³⁾	766	773	829	956	921	958	681	731	707	746	875	750	801	798	932	432
Higher Education Institutions	16	17	17	20	30	25	28	33	32	42	35	-	-	-	-	17
Private Industry/Public corporations	1,492	1,437	1,346	1,285	1,330	1,506	1,287	1,541	1,374	1,356	1,347	-	-	-	-	1,651
Overseas	93	65	67	161	160	183	154	96	35	14	28	-	-	-	-	17
Others	4	7	6	7	12	8	9	11	9	-	-	-	-	-	-	-
Less receipts	185	143	142	127	116	123	79	132	127	87	52	57	100	77	81	60
Total Net expenditure	2,186	2,156	2,123	2,302	2,337	2,557	2,081	2,279	2,032	2,070	2,234	2,314	2,140	2,272	2,240	2,057
Total R&D																
Total Gross Expenditure	4,837	4,778	4,884	5,176	5,401	5,680	5,325	5,713	5,513	5,888	6,082	6,412	6,367	6,734	7,069	7,440
Within government departments ⁽³⁾	1,343	1,375	1,506	1,701	1,730	1,803	1,641	1,751	1,723	2,075	2,174	2,239	2,276	2,320	2,508	2,060
Higher Education Institutions	1,041	1,153	1,212	1,259	1,438	1,528	1,505	1,602	1,801	1,830	1,852	1,847	1,924	2,123	2,370	2,762
Private Industry/Public corporations	2,051	1,864	1,774	1,711	1,765	1,872	1,650	1,849	1,609	1,605	1,655	343	376	391	410	2,231
Overseas	243	228	244	337	345	382	377	353	304	300	320	279	256	274	307	292
Others	159	158	149	168	124	94	153	158	77	80	81	83	95	75	82	96
Less receipts	321	210	229	242	271	309	248	311	313	246	233	504	615	614	620	666
Total Net expenditure⁽⁴⁾	4,516	4,568	4,656	4,934	5,130	5,371	5,078	5,402	5,200	5,642	5,850	5,908	5,751	6,119	6,449	6,774

Notes:

Figures post 2001-02 are shown in Table 2.5.

1 Payments to other government departments and Research Councils are excluded here to avoid double counting. The expenditure represented by these payments is shown in the aggregated figures for expenditure within and outside government departments. These payments are also excluded from the figure for receipts.

2 Following a National Statistics Quality Review conducted during 2002-03 the MOD's R&D statistics were revised for 1997-98 to 2000-01. The changes were: the removal of associated costs, a review of the treatment of VAT and the reclassification of R&D in relation to the OECD Frascati definitions but more detailed breakdown as shown are not available.

3 Includes Research Council Institutes and Local Authorities.

4 Includes NHS expenditure from 1995-96.

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Table A3.1: GERD as a percentage of GDP in the G7 countries

	Canada	France	Germany	Italy	Japan ¹	UK	US
1986	1.46	2.15	^c 2.63	^w 1.11	^l 2.70	2.22	^j 2.73
1987	1.41	2.19	2.74	^w 1.16	^l 2.78	2.15	^j 2.70
1988 ^a	1.38	2.19	^c 2.73	^w 1.19	^l 2.79	2.10	^j 2.65
1989	1.45	2.23	2.71	^w 1.21	^l 2.88	2.11	^j 2.62
1990	1.51	2.32	^c 2.61	^w 1.25	^l 2.95	2.10	^j 2.65
1991	1.57	2.32	^a 2.47	^a 1.19	^b 2.78	2.03	^j 2.72
1992	1.62	2.33	^c 2.35	1.15	^b 2.73	^a 1.99	^j 2.64
1993	1.68	2.38	^o 2.28	1.10	^b 2.65	2.02	^j 2.51
1994	1.73	2.32	^{co} 2.19	1.02	^b 2.60	1.98	^j 2.41
1995	1.70	2.29	^c 2.19	0.97	^b 2.71	1.91	^j 2.50
1996	1.65	2.27	^c 2.19	0.99	2.81	1.83	^j 2.54
1997	1.66	^a 2.19	^o 2.24	^a 1.03	2.87	1.77	^j 2.57
1998	1.76	2.14	^{co} 2.27	1.05	3.01	1.76	^{aj} 2.60
1999	1.80	2.16	2.40	1.02	3.02	1.82	^j 2.64
2000	1.91	2.15	^a 2.47	1.04	3.00	1.82	^j 2.71
2001	2.09	2.20	2.47	1.08	3.07	1.79	^j 2.72
2002	2.04	2.24	2.50	1.12	3.12	1.80	^j 2.62
2003	2.04	2.18	2.54	1.10	3.14	1.75	^j 2.61
2004	2.07	2.16	^a 2.50	1.09	3.13	1.69	^j 2.55
2005	2.04	2.11	2.51	1.09	3.31	1.72	^j 2.59
2006	2.01	2.11	2.54	1.13	3.41	1.74	^{aj} 2.65
2007	1.96	2.08	2.53	1.17	3.46	1.77	^j 2.72
2008	1.92	2.12	2.69	1.21	^a 3.47	^c 1.78	^j 2.86
2009	1.94	2.27	2.82	1.26	3.36	^c 1.85	^j 2.92
2010	1.85	^a 2.24	2.80	1.27	3.25	^c 1.80	^j 2.83
2011 ^p	1.74	2.25	^c 2.88	^p 1.25	3.39	^p 1.78	^j 2.77

Notes:

1. Japan adjusted up through 1995 for international comparability by OECD.

a: Break in series with previous year for which data is available

b: Secretariat estimate or projection based on national sources

c: National estimate or projection adjusted, if necessary, by the Secretariat to meet OECD norms

j: Excludes most or all capital expenditure

l: Overestimated or based on overestimated data

o: Includes other classes

p: Provisional

w: Including extramural R&D expenditure

Source: OECD Main Science and Technology Indicators

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Table A3.2: BERD as a percentage of GDP in the G7

	Canada	France	Germany	Italy	Japan ¹	UK	US					
1986	0.79	1.26	^c	1.90	^w	0.65	^l	1.80	^a	1.53	^j	1.94
1987	0.78	1.29		1.98	^w	0.67	^l	1.83		1.48	^j	1.92
1988	0.75	1.30	^c	1.98	^w	0.69	^l	1.90		1.45	^j	1.88
1989	0.73	1.35		1.96	^w	0.71	^l	2.01		1.46	^j	1.84
1990	0.76	1.40	^c	1.88	^w	0.73	^l	2.09		1.46	^j	1.87
1991	0.78	1.43	^a	1.71	^a	0.67	^l	2.10		1.36	^j	1.93
1992	0.82	^a	1.46	^c	1.61	0.64	^l	2.00	^a	1.31	^j	1.86
1993	0.88	1.47	^o	1.53	0.59	0.59	^l	1.88		1.33	^j	1.75
1994	0.98	1.43	^c	1.46	0.54	0.54	^l	1.85		1.28	^j	1.67
1995	0.99	1.39		1.45	0.52	0.52	^l	1.90		1.24	^j	1.76
1996	0.96	1.40	^c	1.45	0.53	0.53	^a	2.00		1.19	^j	1.83
1997	0.99	^a	1.37	1.51	0.51	0.51		2.07		1.15	^j	1.88
1998	1.06	1.33	^c	1.54	0.51	0.51		2.14		1.15	^j	1.91
1999	1.06	1.36		1.67	0.50	0.50		2.14		1.22	^j	1.96
2000	1.15	1.34		1.74	0.52	0.52		2.13		1.18	^j	2.02
2001	1.29	^a	1.39	1.73	0.53	0.53		2.27	^a	1.18	^j	1.97
2002	1.18	1.42		1.73	0.54	0.54		2.32		1.17	^j	1.83
2003	1.16	1.36		1.77	0.52	0.52		2.36		1.12	^j	1.81
2004	1.17	^a	1.36	1.75	0.52	0.52		2.36		1.06	^j	1.77
2005	1.14	1.31		1.74	0.55	0.55		2.53		1.05	^j	1.80
2006	1.14	^a	1.33	1.78	0.55	0.55		2.63		1.07	^j	1.86
2007	1.10	1.31		1.77	0.61	0.61		2.70		1.11	^j	1.93
2008	1.04	1.33		1.86	0.65	0.65		2.72		1.10	^j	2.04
2009	1.02	1.40		1.91	0.67	0.67		2.54		1.12	^j	2.03
2010	0.93	1.42		1.88	0.68	0.68		2.49		1.10	^j	1.94
2011 ^p	0.89	1.42	^p	1.94	^p	0.68		2.61	^p	1.09	^j	1.89

Notes:

Source: OECD Main Science and Technology Indicators

1. Japan adjusted up through 1995 for international comparability by OECD.

a: Break in series with previous year for which data is available

b: Secretariat Secretariat estimate or projection based on national sources

c: National estimate or projection adjusted, if necessary, by the Secretariat to meet OECD norms

j: Excludes most or all capital expenditure

l: Overestimated or based on overestimated data

o: Includes other classes

p: Provisional

w: Including extramural R&D expenditure

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Table A3.3: HERD as a percentage of GDP in the G7

	Canada	France	Germany	Italy	Japan ¹	UK	US
1986	0.34	0.32	^c 0.39	0.22	^l 0.54	0.33	^j 0.26
1987	0.33	0.33	0.40	0.24	^l 0.55	0.34	^j 0.27
1988 ^a	0.34	0.32	^c 0.39	0.24	^l 0.53	0.33	^j 0.28
1989 ^a	0.43	0.33	0.39	0.24	^l 0.52	0.32	^j 0.29
1990	0.45	0.34	^c 0.38	0.26	^l 0.52	0.33	^j 0.29
1991	0.48	0.35	^a 0.40	0.26	^{be} 0.34	0.34	^j 0.31
1992	0.50	0.36	^c 0.40	0.26	^{be} 0.35	0.34	^j 0.31
1993	0.50	0.38	^o 0.40	0.27	^{be} 0.37	^a 0.35	^j 0.31
1994	0.48	0.38	0.40	0.26	^{be} 0.37	0.38	^j 0.31
1995	0.46	0.38	0.40	0.25	^{be} 0.39	0.37	^j 0.31
1996	0.44	0.38	0.41	0.26	^a 0.41	0.36	^j 0.31
1997	0.44	^a 0.38	0.40	^a 0.32	0.41	0.35	^j 0.30
1998	0.48	0.38	0.40	0.33	0.45	0.35	^{aj} 0.30
1999	0.52	0.37	0.39	0.32	0.45	0.36	^j 0.30
2000	0.54	^a 0.40	0.40	0.32	0.44	0.37	^j 0.31
2001	0.58	0.42	0.41	0.35	0.45	0.41	^j 0.33
2002	0.65	0.42	0.43	0.37	0.43	0.43	^j 0.35
2003	0.67	0.42	0.43	0.37	0.43	0.42	^j 0.37
2004	0.70	^a 0.40	0.41	0.36	0.42	0.42	^j 0.37
2005	0.69	0.40	0.42	^a 0.33	0.44	0.44	^j 0.36
2006	0.66	0.41	0.41	0.34	0.43	0.46	^{aj} 0.37
2007	0.67	0.41	0.41	0.35	0.44	0.46	^j 0.37
2008	0.68	0.43	0.45	0.37	^a 0.40	0.47	^j 0.38
2009	0.71	0.47	0.50	0.38	0.45	0.52	^j 0.41
2010	0.70	0.48	0.51	0.36	0.42	0.49	^j 0.42
2010 ^p	0.66	0.48	^c 0.52	^p 0.36	0.45	^p 0.48	^{pj} 0.42

Notes:

Source: OECD Main Science and Technology Indicators

1. Japan adjusted up through 1995 for international comparability by OECD.

a: Break in series with previous year for which data is available

b: Secretariat estimate or projection based on national sources

c: National estimate or projection adjusted, if necessary, by the Secretariat to meet OECD norms

e: National results adjusted by the Secretariat to meet OECD norms

j: Excludes most or all capital expenditure

l: Overestimated or based on overestimated data

o: Includes other classes

p: Provisional

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Table A3.4: GovERD as a percentage of GDP in the G7

	Canada	France	Germany	Italy	Japan ¹	UK	US
1986	0.32	0.55	^c 0.33	^w 0.24	0.25	^a 0.31	^h 0.46
1987	0.29	0.55		^w 0.26	0.27	0.30	^h 0.44
1988	0.27	0.55	^c 0.34	^w 0.26	0.25	0.28	^h 0.43
1989	0.28	0.53		^w 0.26	0.23	0.29	^h 0.42
1990	0.29	0.56	^c 0.34	^w 0.26	0.22	0.28	^h 0.42
1991	0.29	0.53	^a 0.36	^a 0.27	0.23	^a 0.29	^h 0.40
1992	0.29	^a 0.49	^a 0.33	0.25	0.24	0.30	^h 0.39
1993	0.28	0.50	^o 0.35	0.23	0.27	0.30	^h 0.38
1994	0.26	0.48	^o 0.33	0.22	0.25	0.30	^h 0.36
1995	0.24	0.48	^o 0.34	0.21	0.28	0.28	^h 0.35
1996	0.24	0.46	^o 0.34	0.20	0.26	0.27	^h 0.33
1997	0.22	^a 0.41	^o 0.33	0.20	0.25	0.24	^h 0.31
1998	0.21	0.40	^o 0.33	0.21	0.28	0.24	^h 0.30
1999	0.21	0.39	^o 0.33	0.20	0.30	0.22	^h 0.29
2000	0.22	^a 0.37	^o 0.34	0.20	0.30	0.23	^h 0.28
2001	0.22	0.36	^o 0.34	0.20	0.29	^a 0.18	^h 0.31
2002	0.21	0.37	^o 0.34	0.20	0.30	0.17	^h 0.32
2003	0.20	0.36	^o 0.34	0.19	0.29	0.18	^h 0.32
2004	0.18	0.37	^o 0.34	0.20	0.30	0.18	^h 0.31
2005	0.20	0.38	^o 0.35	^a 0.19	0.27	0.18	^h 0.32
2006	0.20	0.35	^o 0.35	0.19	0.28	0.17	^h 0.32
2007	0.19	0.34	^o 0.35	0.17	0.27	0.16	^h 0.32
2008	0.19	0.34	^o 0.38	0.15	^a 0.29	0.16	^h 0.32
2009	0.21	0.37	^o 0.42	0.17	0.31	0.17	^h 0.34
2010	0.21	^a 0.31	^o 0.42	0.17	0.29	0.17	^h 0.35
2011 ^p	0.18	0.32	^o 0.42	0.17	0.28	^p 0.17	^h 0.34

Notes:

1. Japan adjusted up through 1995 for international comparability by OECD.

a: Break in series with previous year for which data is available

b: Secretariat estimate or projection based on national sources

c: National estimate or projection adjusted, if necessary, by the Secretariat to meet OECD norms

h: Federal or central government only

o: Includes other classes

p: Provisional

w: Including extramural R&D expenditure

Source: OECD Main Science and Technology Indicators

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Table A3.5: R&D in G7 countries by sector of performance, 2011

	Canada	France	Germany	Italy	Japan	UK	US
Percentage of GERD performed by:							
Business Enterprise sector ^p	51.3	70.5	63.4 ^p	54.2	77.0 ^p	61.5 ^{jp}	68.4
Higher Education sector ^p	38.1	20.0	21.2 ^p	28.6	13.2 ^p	26.9 ^{jp}	15.2
Government sector ^p	10.1	8.8	14.1 ^p	13.7	8.4 ^p	9.3 ^{hjp}	12.1
Private Non-Profit sector ^p	0.5	0.7	1.2 ^p	3.5	1.5 ^p	2.4 ^{cjp}	4.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes:

.. not available

a: Break in series with previous year for which data is available

b: Data relates to 2010

c: National estimate or projection adjusted, if necessary, by the Secretariat to meet OECD norms

e: National results adjusted by the Secretariat to meet OECD norms

h: Federal or central government only

j: Excludes most or all capital expenditure

n: Included elsewhere

o: Includes other classes

p: Provisional

Source: OECD Main Science and Technology Indicators

Table A3.6: R&D performed in G7 countries by source of funding, 2011

	Canada	France	Germany ^b	Italy ^b	Japan	UK	US
Percentage of GERD financed by:							
Industry ^p	46.5	67.0	53.5	44.7	76.5 ^p	44.6 ^{jp}	60.0
Government ^{bc}	36.1 ^a	25.0	37.0	41.6 ^e	16.4 ^p	32.2 ^{jp}	33.4
Other national sources ^{bc}	11.8	1.4	1.8	4.0 ^e	6.6 ^p	6.2 ^{jp}	6.6
Abroad ^p	6.4	6.5	7.6	9.8	0.5 ^p	17.0 ⁿ	..
	100.8	100.0	100.0	100.0	100.0	100.0	100.0

Notes - see Table A3.5 above.

Source: OECD Main Science and Technology Indicators

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