



Universities UK

Higher education in
FACTS & FIGURES

RESEARCH & INNOVATION

SUMMER 2007



Universities UK

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HIGHER EDUCATION IN FACTS AND FIGURES: RESEARCH AND INNOVATION

Research and innovation are crucial to the future of the UK's competitiveness. Universities are the prime drivers for this, both through producing, and acting as a magnet for, the best knowledge and talent. The UK's research performance is exceptionally strong, and business-university collaboration brings much-needed added value to the economy.

About Universities UK

Universities UK is the major representative body and membership organisation for the higher education sector. It represents the UK's universities and some higher education colleges. Its 130 members are the executive heads of these institutions.

Universities UK works closely with policy makers and key education stakeholders to advance the interests of universities and to spread good practice throughout the higher education sector.

Founded in 1918 and formerly known as the Committee for Vice-Chancellors and Principals (CVCP), Universities UK will celebrate its 90th anniversary in 2008.

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ACADEMIC STAFF

ACADEMIC STAFF BY GENDER AND GRADE: 1994/95 and 2005/06

Grade group	1994/95		2005/06	
	Male	Female	Male	Female
Professors	93%	7%	83%	17%
Senior lecturers & researchers	83%	17%	66%	34%
Lecturers	67%	33%	53%	47%
Researchers	63%	37%	54%	46%
Other grades	63%	37%	51%	49%
Total	70%	30%	58%	42%

Source: Higher Education Statistics Agency (HESA): Resources of Higher Education Institutions, table 14 (1994/95) and table 12 (2005/06).

PERCENTAGE OF WOMEN AMONG ACADEMIC STAFF BY FIELD OF SCIENCE: 2002 or latest available data

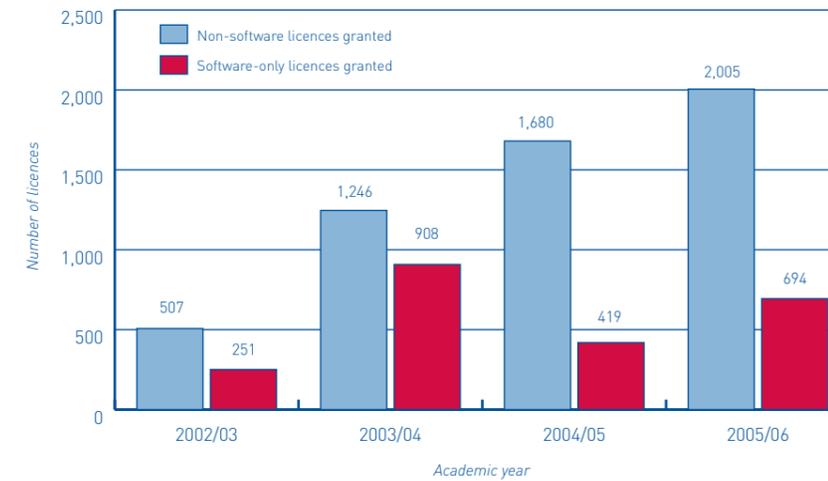
Country	Agricultural science	Engineering & technology	Humanities	Medical sciences	Natural sciences	Social sciences
Austria	31	9	37	32	18	30
Belgium	28	20	37	33	30	34
Switzerland	41	18	42	34	25	36
Cyprus	x	13	39	x	22	35
Czech republic	33	25	39	38	21	42
Germany	34	13	37	37	20	25
Denmark	47	15	38	35	24	29
Finland	42	23	51	53	31	48
France	x	16	45	36	24	34
Hungary	29	18	47	44	27	33
Israel	14	12	32	38	12	33
Italy	27	14	39	25	32	32
Lithuania	46	25	66	53	39	58
Luxembourg	x	0	67	50	50	38
Latvia	x	x	57	31	0	57
Malta	0	5	22	32	9	22
The Netherlands	30	18	37	43	23	34
Norway	34	17	40	45	24	39
Poland	34	16	35	44	35	40
Portugal	38	21	x	42	45	46
Sweden	43	20	46	49	31	45
Slovenia	30	12	36	37	10	31
Slovakia	26	29	35	43	34	46
Turkey	25	29	47	39	37	33
United Kingdom	37	18	35	54	28	43
EU-25	37	19	40	42	28	40

x - Data not available.

Source: European Commission (2006): Women and Science Indicators, table 3.

OUTCOMES AND OUTPUTS

NUMBER OF LICENCES GRANTED BY UK HIGHER EDUCATION INSTITUTIONS: 2002/03-2005/06



Source: Higher Education Funding Council for England (HEFCE) (2007): Higher Education Business and Community Interaction Survey, July 2007/17.

PERCENTAGE SHARE OF WORLD SCIENTIFIC PUBLICATIONS: 2004; AND PERCENTAGE AVERAGE ANNUAL GROWTH RATES: 2000-04

	World share of scientific publications (%) 2004	Average annual growth rates (%) 2000-2004
United States	33.0	*
United Kingdom	8.8	-2.6
Germany	8.1	-1.5
France	5.8	-2.1
Italy	4.5	2.2
Spain	3.3	2.7
Netherlands	2.6	0.4
Sweden	1.9	-1.2
Switzerland	1.9	0.0
Poland	1.5	5.1
Belgium	1.4	2.1
Turkey	1.3	18.7
Israel	1.2	-0.7
Austria	1.0	1.7
Denmark	1.0	-1.0
Finland	0.9	-1.1
Greece	0.8	6.4
Norway	0.7	1.3
Czech Republic	0.6	3.3
Portugal	0.6	9.0
Hungary	0.5	-0.1
Ireland	0.4	4.1
Romania	0.3	0.4
Slovakia	0.2	-1.6
Slovenia	0.2	0.2
Bulgaria	0.2	-2.0
Lithuania	0.1	9.3
Estonia	0.1	1.9
Iceland	0.1	5.9

Source: Towards a European Knowledge area; Key figures 2007 on Science, Technology and Innovation, figure II.3.1.

* Annual growth rate for United States between 2000-2004 unavailable, however overall share has fallen by 3 percentage points since 1996.

In world share of citations (for 2004) the UK has maintained its position, 2nd to the USA globally with a figure of 11.9% compared to 47.5% for the US.

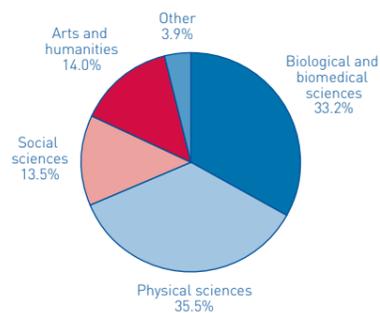
Source: Evidence Ltd (2007): PSA target metrics for the UK research base.

NUMBER OF SCIENTIFIC PUBLICATIONS AND RELATIVE PRODUCTION OF CITATIONS PER THOUSAND POPULATION: 2000-2004

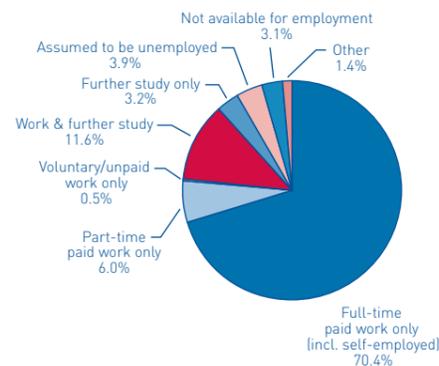
	Scientific publications per 1000 population (annual average, 2000-04)	Relative production of citations
Denmark	1.46	8.91
Finland	1.43	7.79
Netherlands	1.20	7.16
United Kingdom	1.15	6.51
Austria	0.92	4.65
United States	0.91	5.78
Germany	0.79	4.18
France	0.78	3.84
EU-15	0.77	3.57
Slovenia	0.75	2.11
Japan	0.56	2.30
Greece	0.50	1.56
Czech Republic	0.45	1.37
Hungary	0.40	1.52
Slovakia	0.34	0.87
Poland	0.28	0.79

Source: Czech Statistical Office, derived from Thomson ISI National Science Indicators (NSI), [http://www.czso.cz/eng/edicniplan.nsf/t/76002F92B1/\\$File/10050301.pdf](http://www.czso.cz/eng/edicniplan.nsf/t/76002F92B1/$File/10050301.pdf).

DOCTORATE GRADUATES FROM UK HIGHER EDUCATION INSTITUTIONS BY SUBJECT GROUP: 2005/06



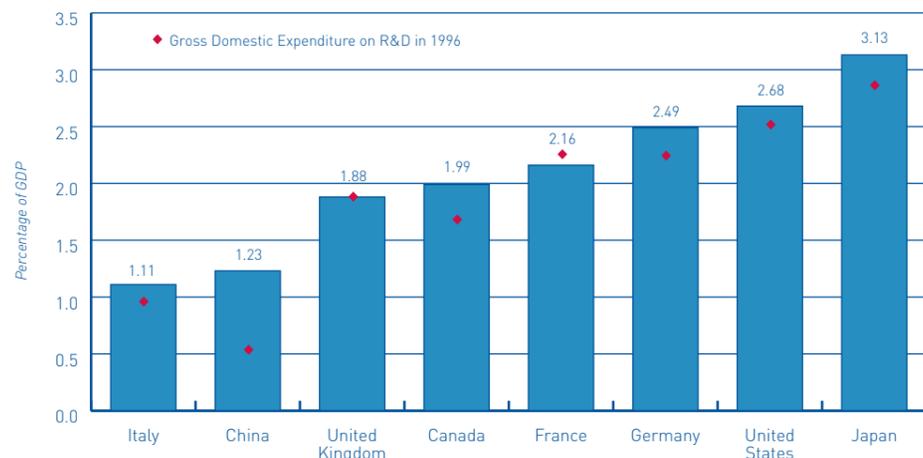
DESTINATION OF UK-DOMICILED DOCTORATE GRADUATES FOR ALL SUBJECTS, 2004/05



Source: Higher Education Statistics Agency (HESA) (2007): Resources of Higher Education Institutions 2005/06, table 13 (lefthand chart); Destinations of leavers from Higher Education, tables 2a and 2c (righthand chart).

RESEARCH AND DEVELOPMENT EXPENDITURE

GROSS DOMESTIC EXPENDITURE ON R&D FOR G7 COUNTRIES PLUS CHINA, EXPRESSED AS A PERCENTAGE OF GDP: 2004*



* Or latest available data.

Source: OECD Factbook 2007: Economic, Environmental and Social Statistics.

TRENDS IN HIGHER EDUCATION EXPENDITURE ON R&D (HERD) IN G7 COUNTRIES AS A PERCENTAGE OF GDP

	UK	Germany	France	Italy	Japan	Canada	USA
1991	0.34	0.40	0.35	0.26	0.34	0.48	0.31
1992	0.35	0.40	0.36	0.26	0.35	0.50	0.31
1993	0.35	0.40	0.38	0.27	0.37	0.50	0.31
1994	0.38	0.40	0.37	0.26	0.37	0.48	0.31
1995	0.37	0.40	0.38	0.25	0.39	0.46	0.31
1996	0.36	0.41	0.38	0.26	0.42	0.44	0.31
1997	0.35	0.40	0.38	0.32	0.41	0.44	0.30
1998	0.35	0.40	0.38	0.33	0.45	0.48	0.30
1999	0.36	0.39	0.37	0.32	0.45	0.52	0.31
2000	0.38	0.40	0.40	0.32	0.44	0.54	0.31
2001	0.41	0.40	0.42	0.35	0.45	0.58	0.33
2002	0.43	0.42	0.42	0.37	0.44	0.65	0.36
2003	0.43	0.43	0.42	0.37	0.44	0.67	0.37
2004	0.42	0.41	0.41	0.36	0.43	0.70	0.36

Source: Office of Science and Technology (OST) (2006): SET statistics, table 7.1.

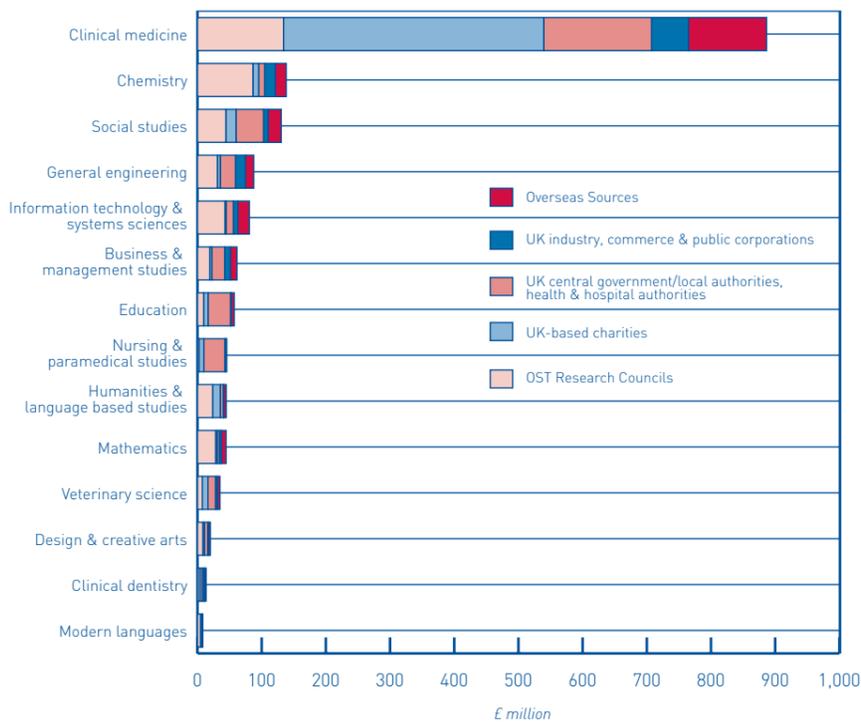
TRENDS IN GOVERNMENT EXPENDITURE ON R&D: 1994/95-2007/08

£ million, in cash terms

	1994/95	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
Science budget R&D	1,174	1,240	1,261	1,279	1,280	1,339	1,459	1,649	1,870	2,143	2,281	2,926	3,130	3,276
HE funding councils R&D	1,017	1,018	1,028	1,033	1,085	1,157	1,276	1,474	1,626	1,665	1,804	1,927	2,019	2,170
Science and engineering base R&D	2,191	2,257	2,289	2,312	2,365	2,496	2,735	3,122	3,496	3,808	4,085	4,854	5,149	5,445
Civil departments R&D	978	1,315	1,327	1,282	1,246	1,351	1,474	1,595	1,849	1,929	1,666	1,597	1,670	1,648
Total civil R&D	3,169	3,572	3,616	3,594	3,611	3,847	4,209	4,717	5,345	5,737	5,751	6,450	6,819	7,093
Total defence R&D	2,032	2,070	2,234	2,314	2,140	2,272	2,240	2,057	2,734	2,677	2,576	2,406	2,709	2,448
Indicative UK contribution to the EU R&D budget	286	339	358	340	375	328	399	391	440	390	335	401	408	361
Total	5,487	5,981	6,207	6,248	6,126	6,447	6,848	7,165	8,519	8,804	8,662	9,257	9,936	9,902

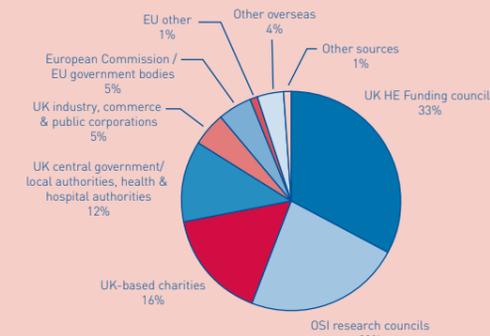
Source: Office of Science and Technology (OST) (2006): SET statistics, table 3.1.

RESEARCH GRANTS AND CONTRACTS INCOME BY SOURCE FOR SELECTED SUBJECTS: 2005/06



Source: Higher Education Statistics Agency (HESA) (2007): Finance Plus, table 4, Research grants and contracts income by institutions, cost centre and source, 2005/06

RESEARCH GRANTS AND CONTRACTS INCOME AT UK HIGHER EDUCATION INSTITUTIONS: 2005/06



Total (2005/06): £4,664 million

Source: Higher Education Statistics Agency (HESA) (2007): Finance Plus, table 5b, Income by institution and source, 2005/06

NOTES

ESTIMATED BREAKDOWN OF INTRAMURAL R&D EXPENDITURE IN BUSINESS, GOVERNMENT AND HIGHER EDUCATION SECTORS WITHIN THE UK AND ENGLISH REGIONS: 2003

£ million

	R&D performed within business (BERD)	R&D performed within Government establishments (GOVERD)	R&D performed within higher education institutions (HERD)
United Kingdom	13,687	2,010	4,457
Wales	264	43	175
Scotland	521	271	575
Northern Ireland	116	17	100
England	12,786	1,678	3,606
North East	281	2	158
North West	1,559	54	363
Yorkshire & Humberside	382	134	347
East Midlands	929	22	223
West Midlands	587	38	228
East of England	3,453	336	412
London	771	279	1,069
South East	3,464	583	614
South West	1,359	231	192

Source: The Office of National Statistics (ONS): Research and experimental development (R&D) statistics, 2003, table 14, Economic trends 621, August 2005. http://www.statistics.gov.uk/articles/economic_trends/ET621_Owen.pdf.