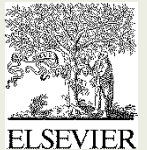


2011

'International Comparative Performance of the UK Research Base'

A report prepared for the Department of
Business, Innovation and Skills

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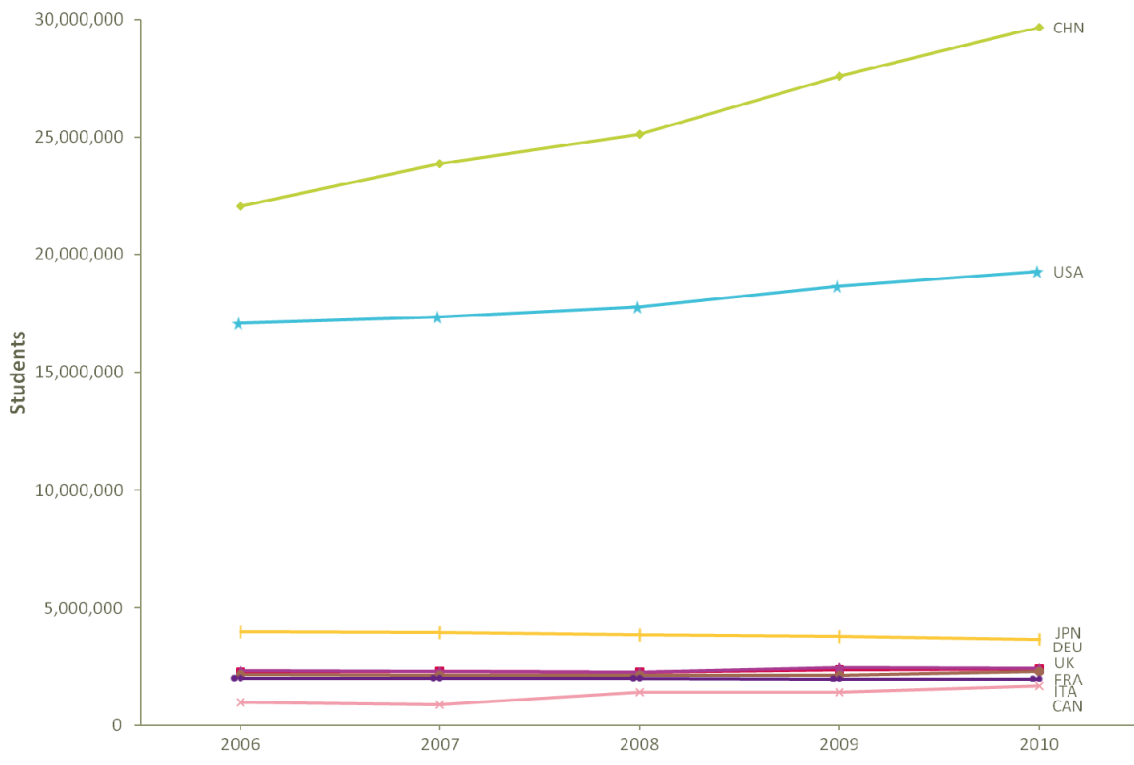
PT 03

'International Comparative Performance of the UK Research Base'

HUMAN CAPITAL



Students – UK and comparator countries

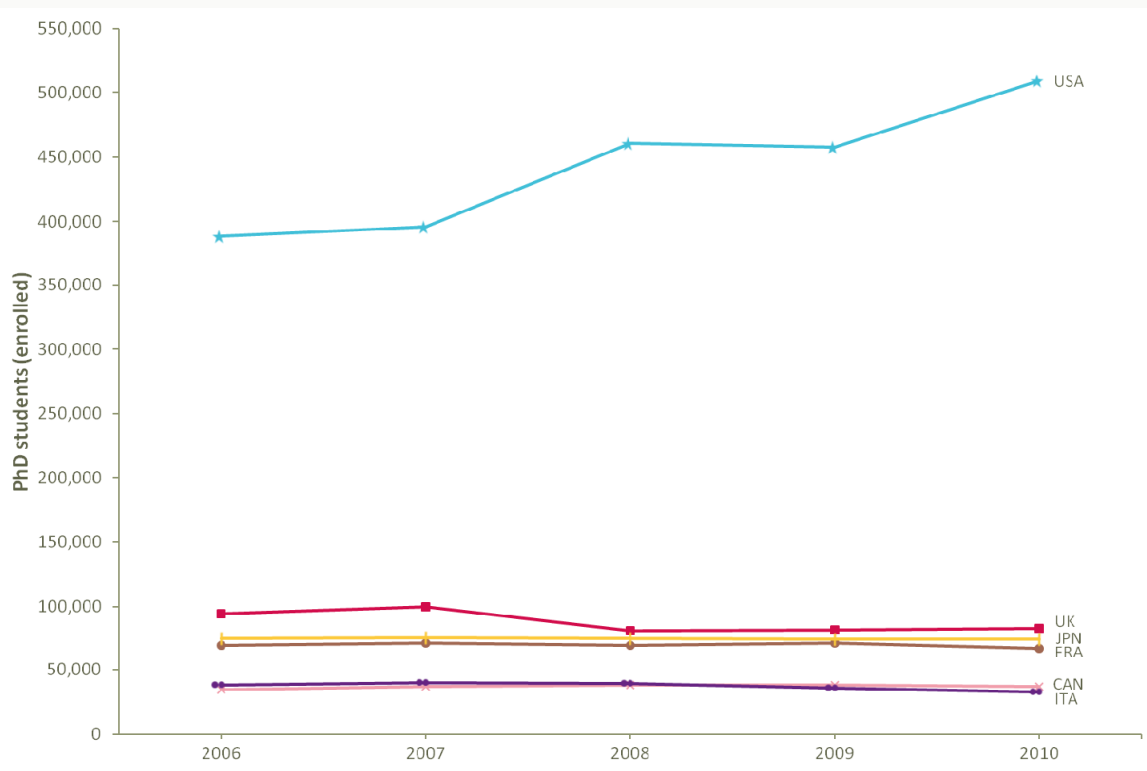


Source: OECD Education

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	2,241,931	2,381,371	139,440	1.52%	-	-
G8	39,762,313	43,329,569	3,567,256	2.17%	4	4
EU-27	16,857,873	17,417,512	559,639	0.82%	2	2
OECD	87,082,657	99,540,279	12,457,612	3.40%	10	10

G8 rankings out of 8 (of 8) countries with available data
 EU27 rankings out of 20 (of 27) countries with available data
 OECD rankings out of 37 (of 42) countries with available data

PhD students (enrolled) – UK and comparator countries

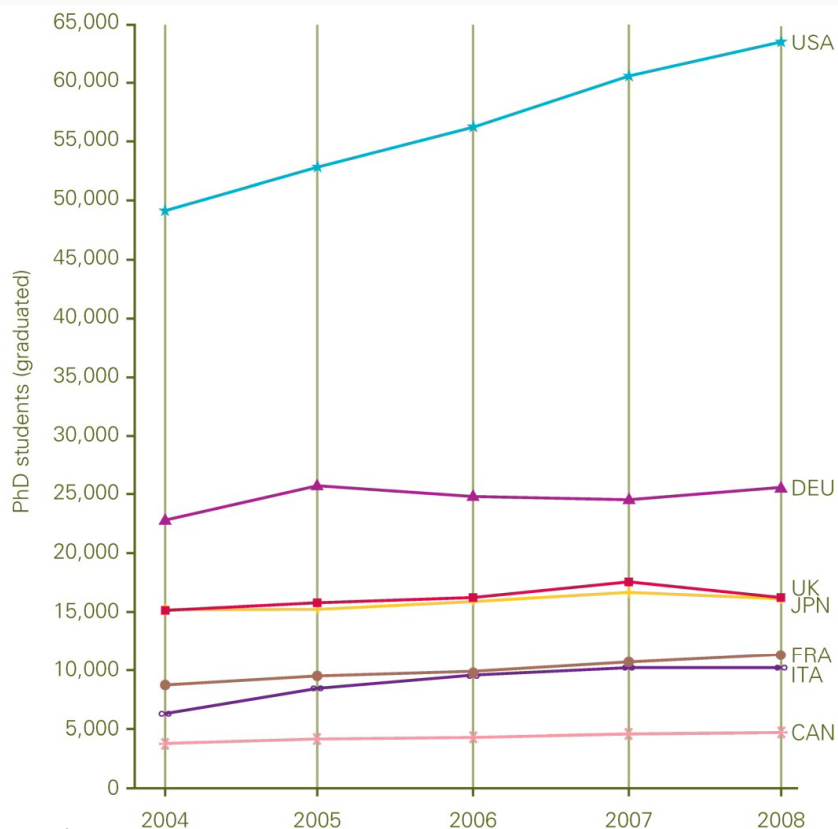


Source: OECD Education

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	94,180	82,975	-11,205	-3.12%	-	-
G8	847,937	968,943	121,006	3.39%	2	2
EU-27	482,651	470,895	-11,756	-0.61%	1	1
OECD	1,298,438	1,459,647	161,209	2.97%	3	3

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 18 (of 27) countries with available data
 OECD rankings out of 32 (of 42) countries with available data

PhD students (graduated) – UK and comparator countries



Source: OECD Education

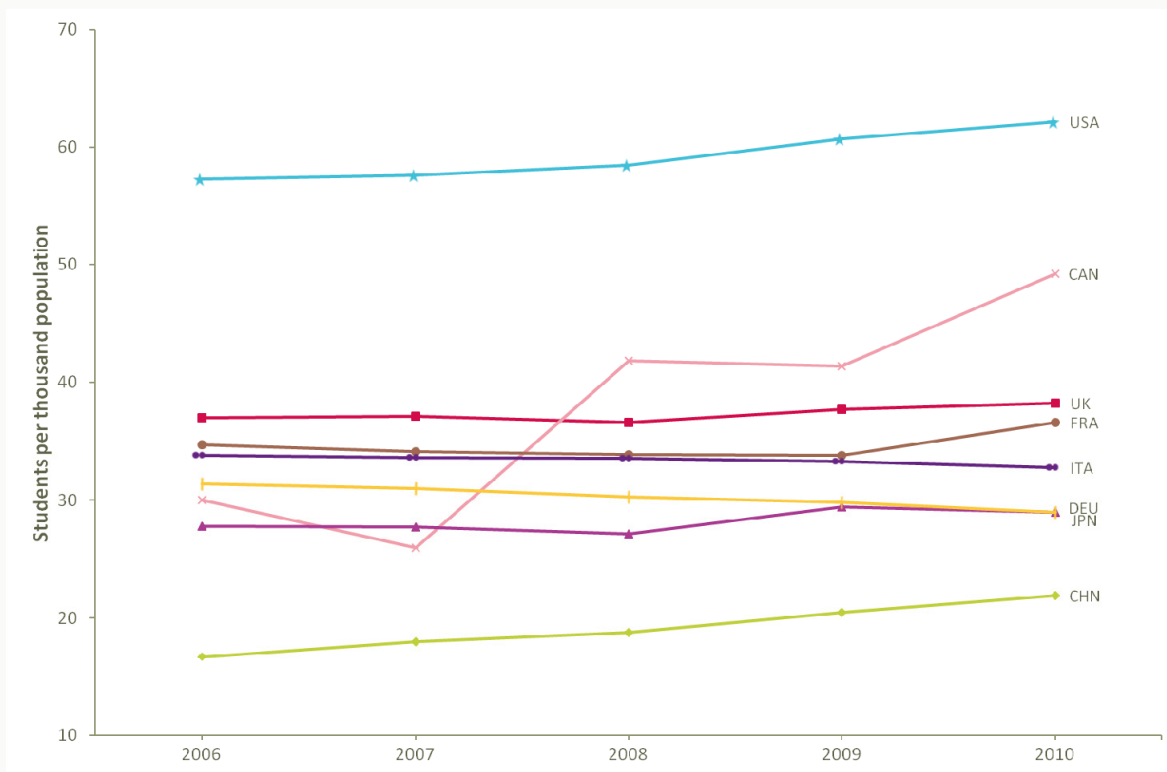
	2004	2008	Change 04-08	CAGR 04-08	UK Rank 2004	UK Rank 2008
UK	15,257	16,606	1,349	2.14%	-	-
G8	80,774	102,479	21,705	6.13%	3	3
EU27	89,300	103,139	13,839	3.67%	2	2
OECD	215,667	228,266	12,599	1.43%	4	3

G8 rankings out of 7 (of 8) countries with available data

EU27 rankings out of 18 (of 27) countries with available data

OECD rankings out of 32 (of 42) countries with available data

Students per thousand population – UK and comparator countries

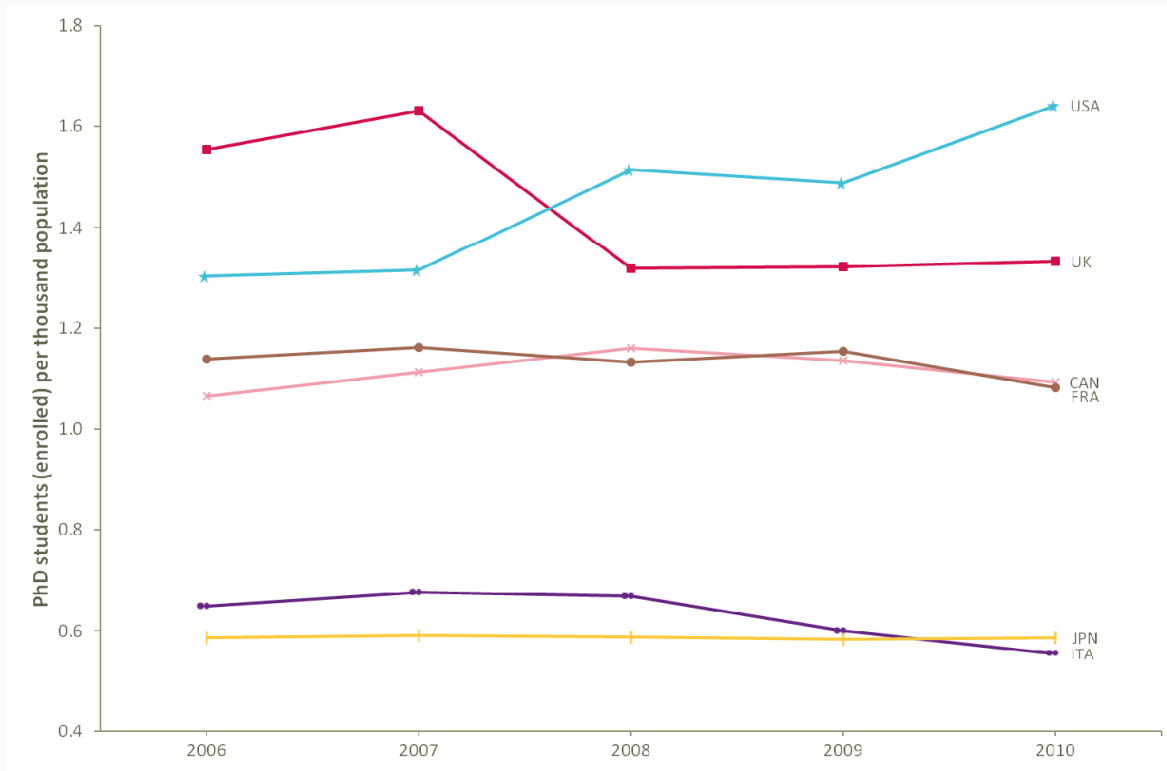


Source: OECD Education and OECD MSTI

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	37.0	38.2	1.2	0.81%	-	-
G8	47.6	51.8	4.3	2.17%	3	4
EU-27	37.0	37.9	0.9	0.58%	11	13
OECD	30.5	34.1	3.6	2.82%	20	23

G8 rankings out of 8 (of 8) countries with available data
 EU27 rankings out of 20 (of 27) countries with available data
 OECD rankings out of 37 (of 42) countries with available data

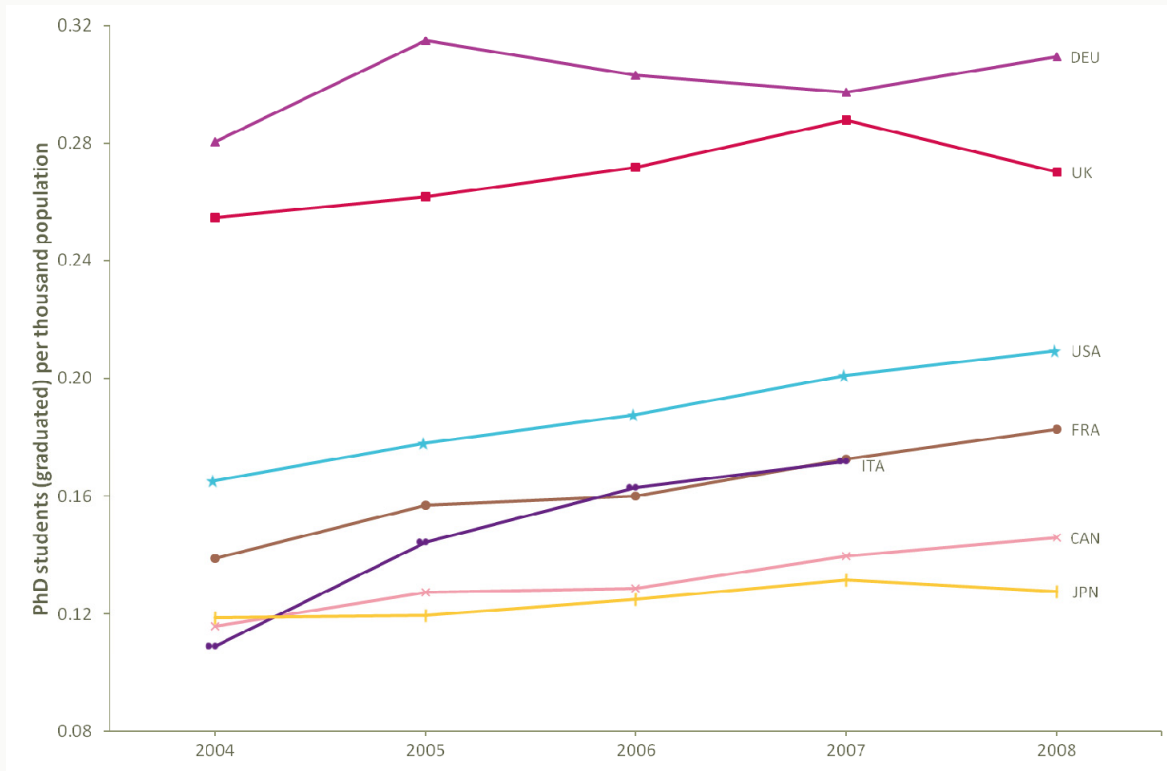
PhD students (enrolled) per thousand population – UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.55	1.33	-0.22	-3.79%	-	-
G8	1.08	1.22	0.13	2.97%	1	2
EU-27	1.30	1.25	-0.04	-0.88%	9	11
OECD	1.03	1.14	0.11	2.49%	11	17

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 18 (of 27) countries with available data
 OECD rankings out of 32 (of 42) countries with available data

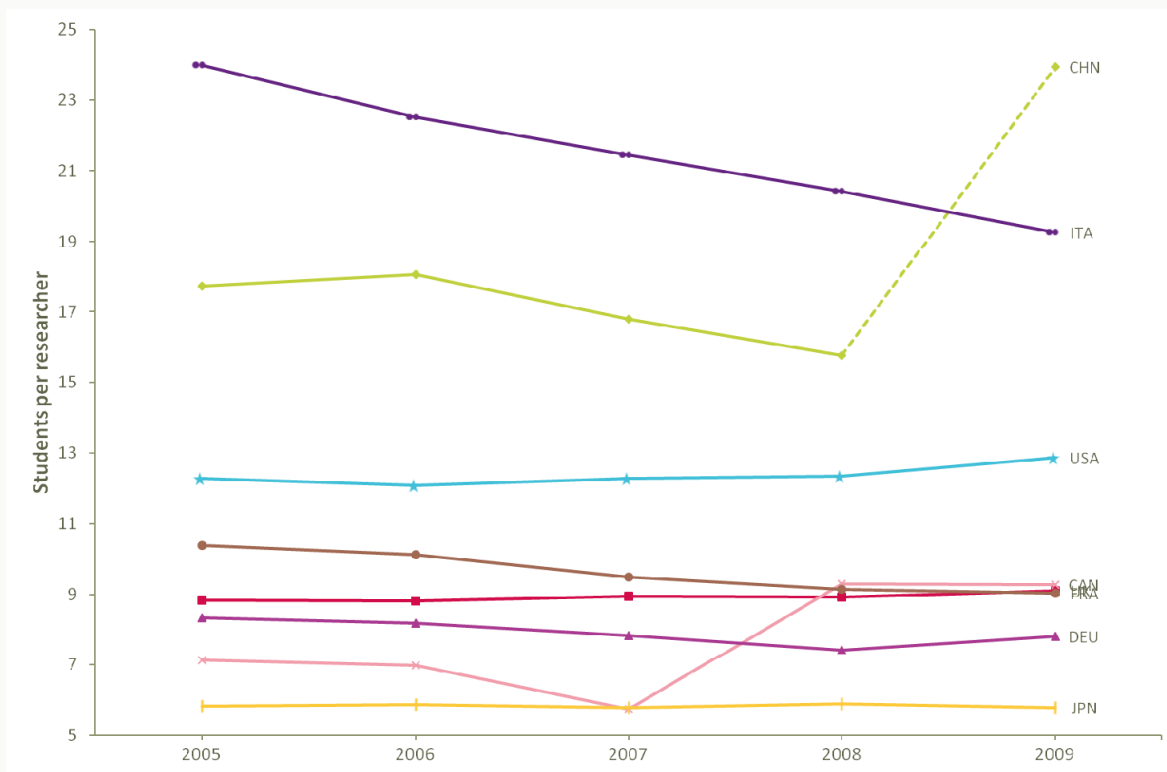
PhD students (graduated) per thousand population – UK and comparator countries



	2004	2008	Change 04-08	CAGR 04-08	UK rank 2004	UK rank 2008
UK	0.25	0.27	0.02	1.48%	-	-
G8	0.17	0.21	0.03	4.34%	2	2
EU-27	0.21	0.23	0.02	2.53%	6	6
OECD	0.16	0.16	0.00	0.34%	7	8

G8 rankings out of 6 (of 8) countries with available data
 EU27 rankings out of 18 (of 27) countries with available data
 OECD rankings out of 32 (of 42) countries with available data

Students per researcher – UK and comparator countries

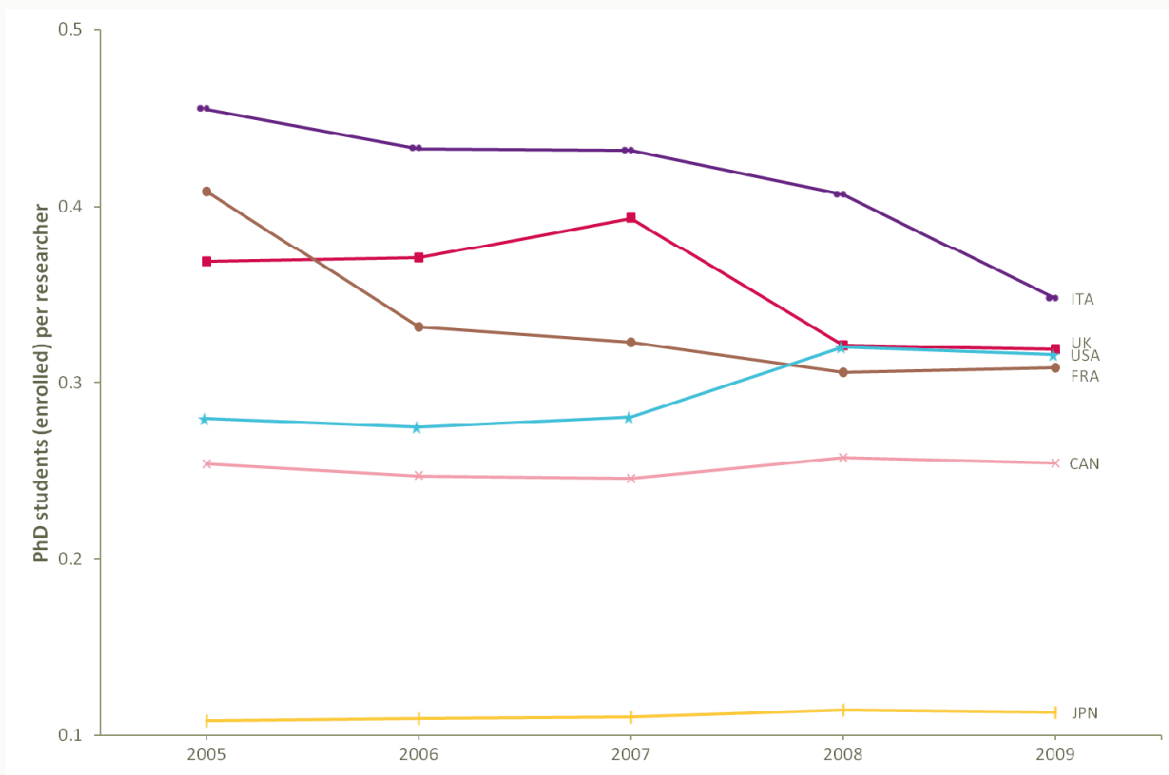


	2005	2009	Change 05-09	CAGR 05-09	UK rank 2005	UK rank 2009
UK	8.8	9.1	0.28	0.78%	-	-
G8	11.3	11.7	0.40	0.88%	5	5
EU-27	12.6	11.5	-1.12	-2.29%	15	13
OECD	13.6	14.3	0.80	1.44%	23	20

G8 rankings out of 8 (of 8) countries with available data
 EU27 rankings out of 20 (of 27) countries with available data
 OECD rankings out of 32 (of 42) countries with available data

Source: OECD Education and OECD MSTI

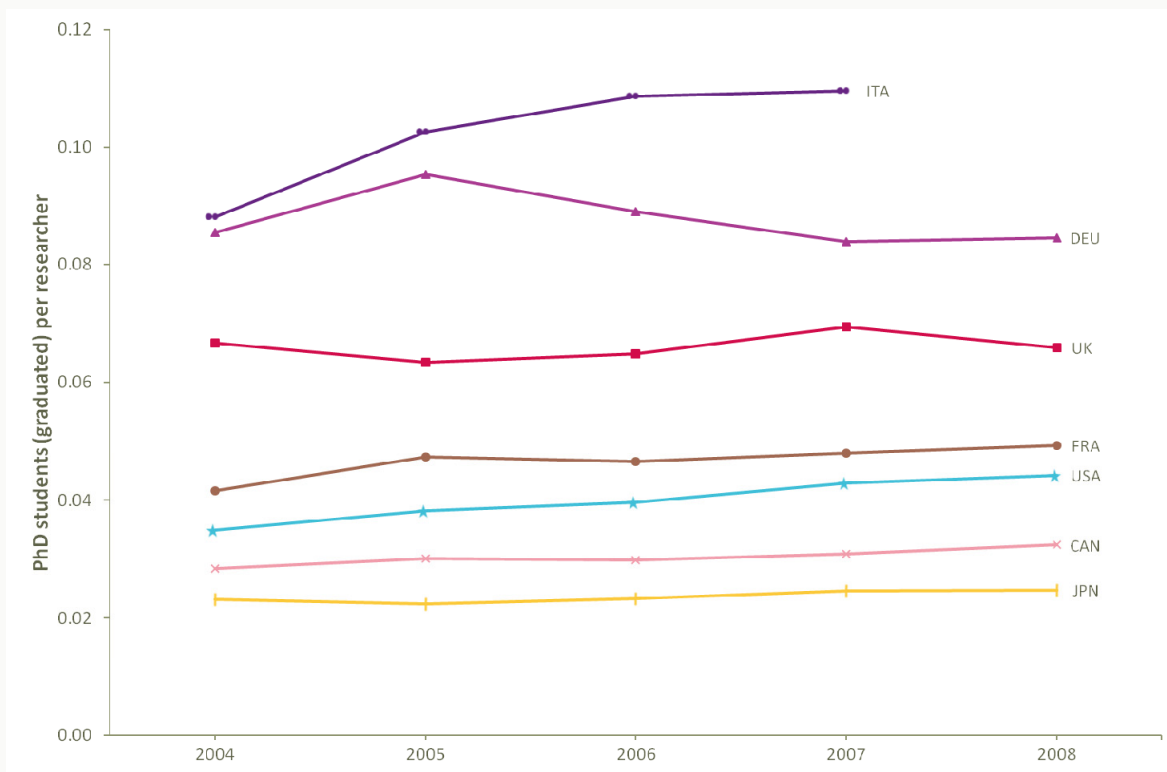
PhD students (enrolled) per researcher – UK and comparator countries



	2005	2009	Change 05-09	CAGR 05-09	UK rank 2005	UK rank 2009
UK	0.37	0.32	-0.05	-3.54%	-	-
G8	0.27	0.28	0.01	1.06%	3	3
EU-27	0.47	0.40	-0.07	-3.76%	14	14
OECD	0.23	0.23	0.00	0.36%	17	19

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 18 (of 27) countries with available data
 OECD rankings out of 29 (of 42) countries with available data

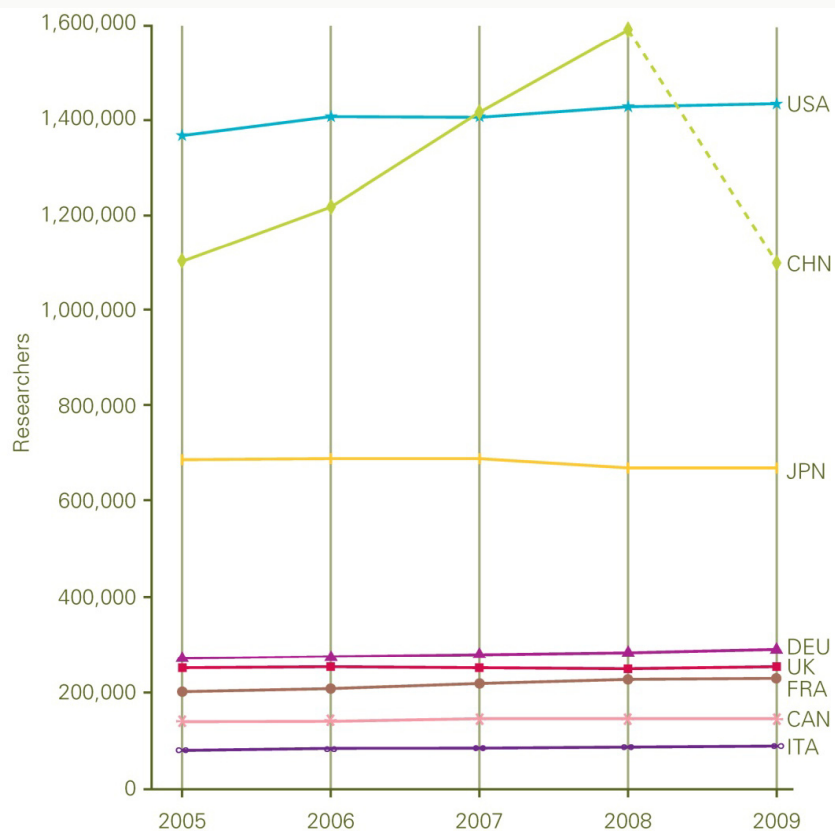
PhD students (graduated) per researcher – UK and comparator countries



	2004	2008	Change 04-08	CAGR 04-08	UK rank 2004	UK rank 2008
UK	0.067	0.066	-0.001	-0.27%	-	-
G8	0.040	0.046	0.006	3.55%	2	2
EU-27	0.070	0.068	-0.002	-0.74%	9	8
OECD	0.046	0.050	0.004	1.96%	11	10

G8 rankings out of 6 (of 8) countries with available data
 EU27 rankings out of 16 (of 27) countries with available data
 OECD rankings out of 26 (of 42) countries with available data

Researchers – UK and comparator countries



Source: OECD MSTI

	2005	2009	Change 05-09	CAGR 05-09	UK Rank 2005	UK Rank 2009
UK	248,599	256,124	7,525	0.75%	-	-
G8	3,463,023	3,599,311	136,287	0.97%	5	5
EU27	1,369,123	1,544,660	175,537	3.06%	2	2
OECD	5,469,438	5,949,193	479,754	2.12%	6	6
World	5,605,045	5,991,085	386,040	1.68%	6	6

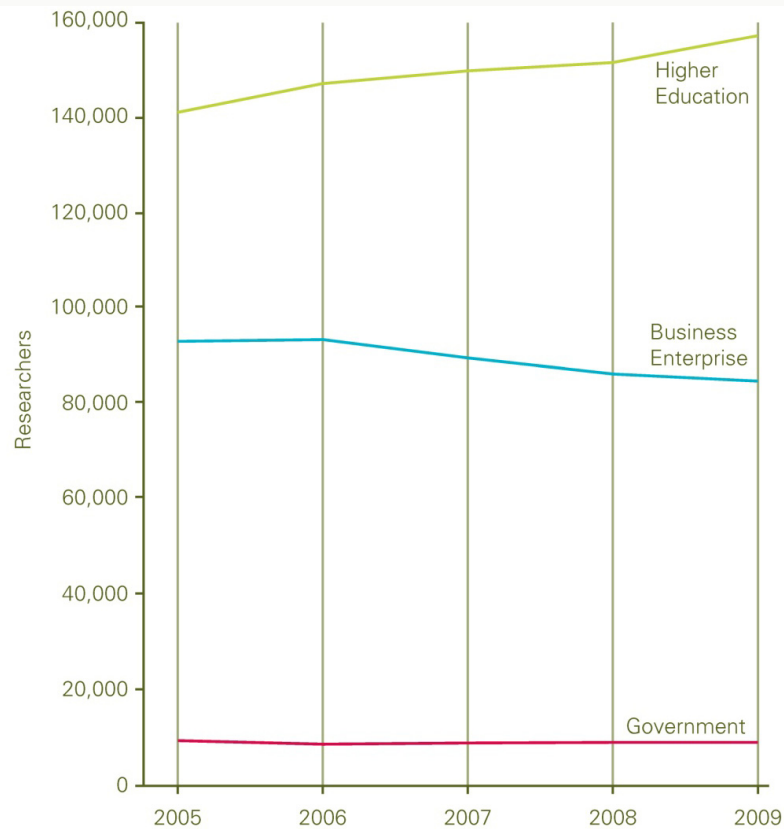
G8 rankings out of 7 (of 8) countries with available data

EU27 rankings out of 18 (of 27) countries with available data

OECD rankings out of 32 (of 42) countries with available data

World rankings out of 36 countries with available data

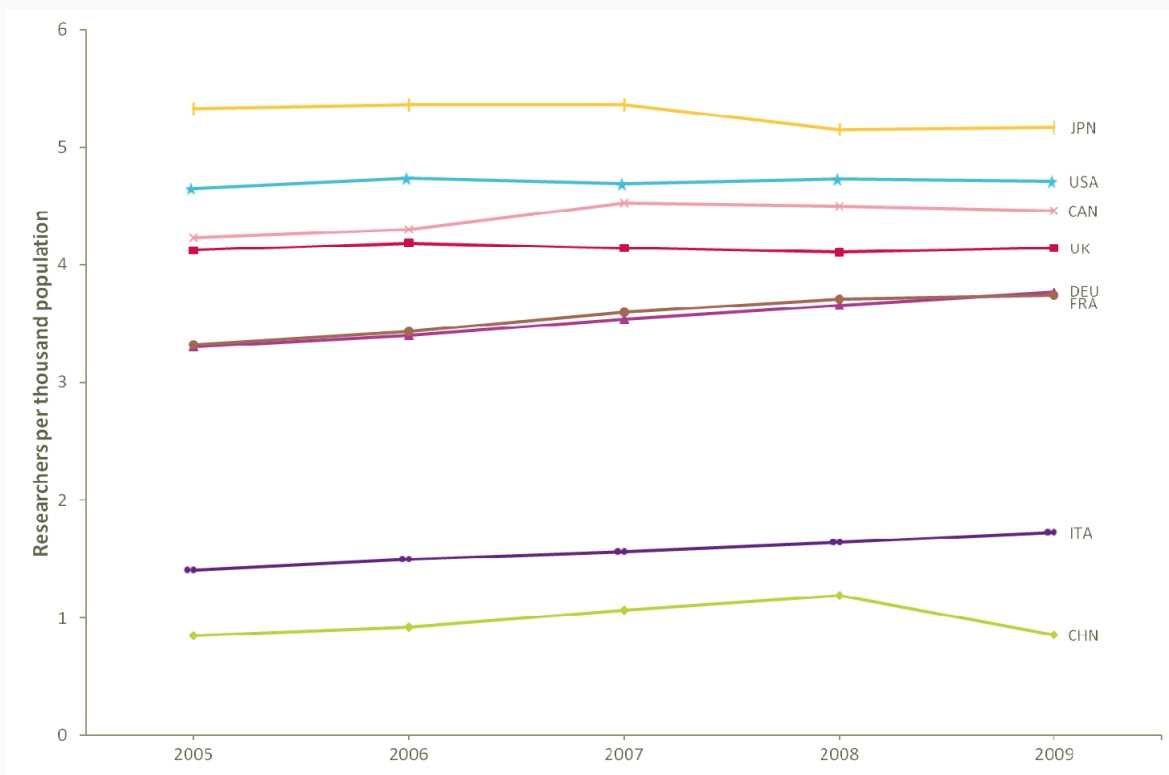
UK researchers by sector of employment



Source: OECD MSTI

	2005	2009	Change 05-09	CAGR 05-09
Business Enterprise researchers	93,717	84,554	-9,164	-2.54%
Government researchers	9,311	8,701	-609	-1.68%
Higher Education researchers	141,762	158,004	16,242	2.75%

Researchers per thousand population – UK and comparator countries

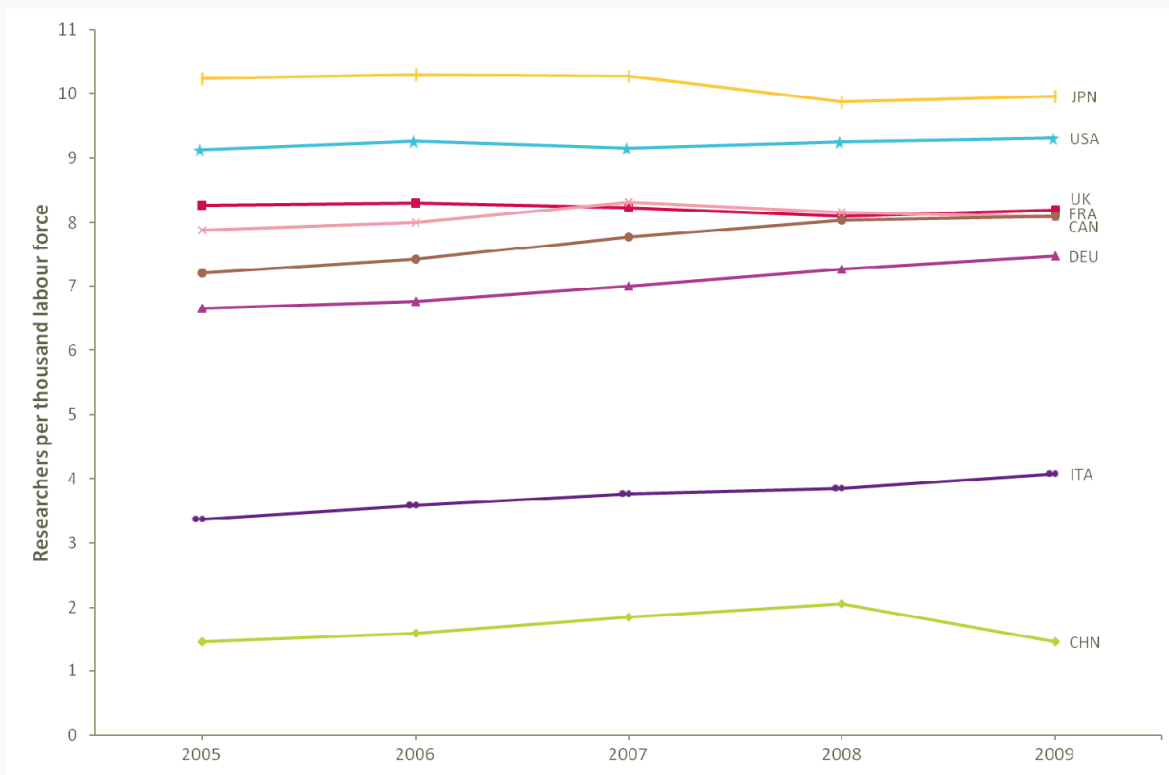


Source: OECD MSTI

	2005	2009	Change 05-09	CAGR 05-09	UK Rank 2005	UK Rank 2009
UK	4.13	4.14	0.01	0.08%	-	-
G8	4.02	4.12	0.09	0.58%	4	4
EU-27	2.92	3.26	0.35	2.84%	5	6
OECD	2.17	2.26	0.09	1.04%	12	14

G8 rankings out of 8 (of 8) countries with available data
 EU27 rankings out of 21 (of 27) countries with available data
 OECD rankings out of 33 (of 42) countries with available data

Researchers per thousand labour force – UK and comparator countries

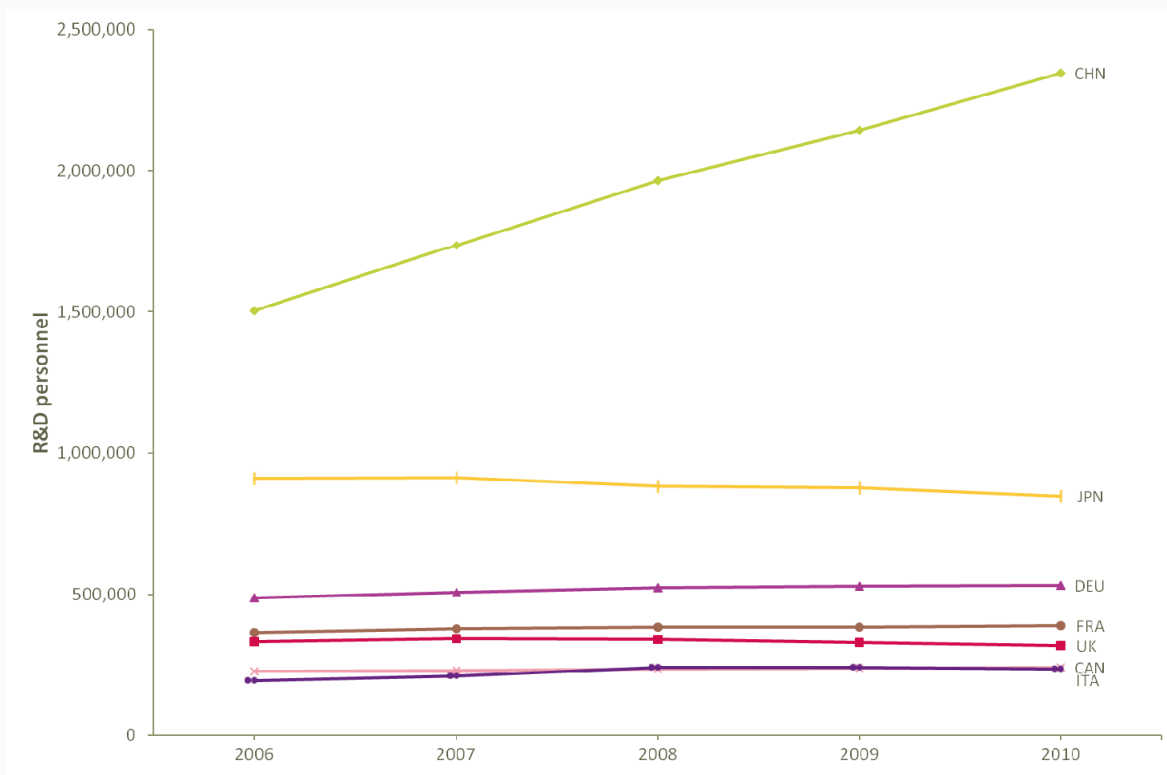


Source: OECD MSTI

	2005	2009	Change 05-09	CAGR 05-09	UK Rank 2005	UK Rank 2009
UK	8.27	8.20	-0.07	-0.22%	-	-
G8	8.38	8.61	0.24	0.70%	3	3
EU-27	6.15	6.73	0.58	2.27%	4	5
OECD	3.91	4.09	0.18	1.14%	8	11

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 19 (of 27) countries with available data
 OECD rankings out of 30 (of 42) countries with available data

R&D personnel – UK and comparator countries

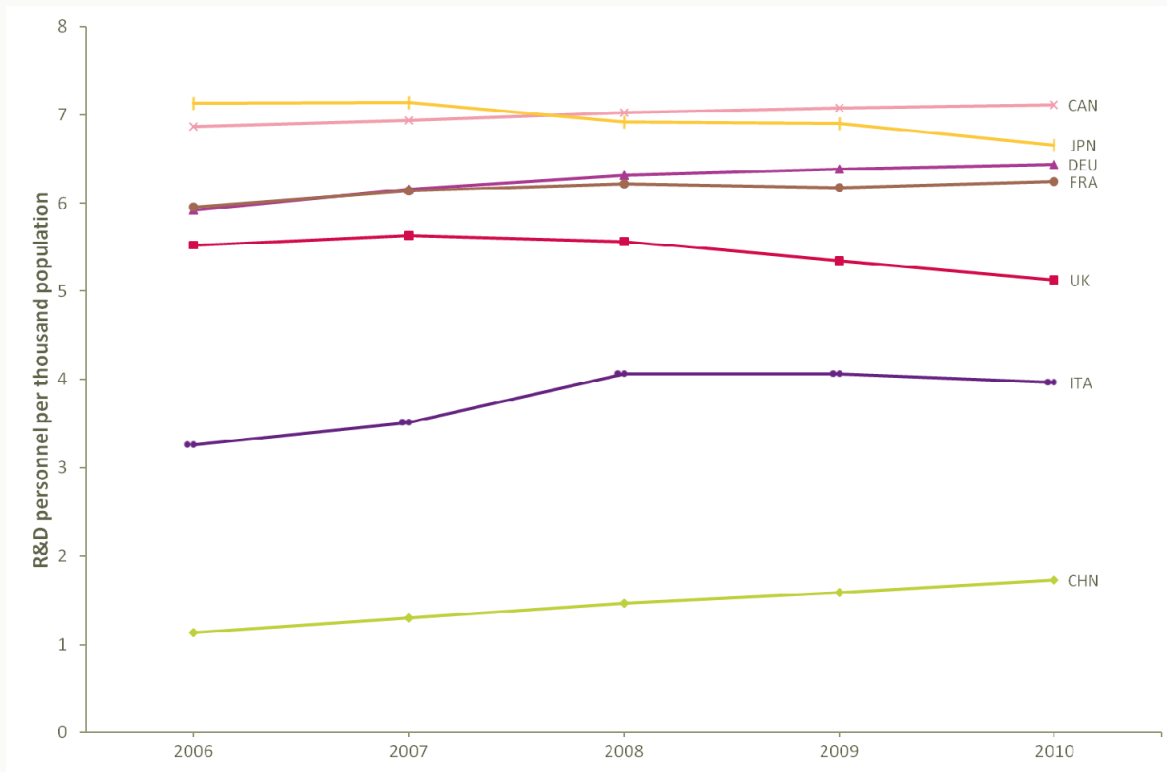


Source: OECD MSTI

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	334,804	319,487	-15,317	-1.16%	-	-
G8	3,431,545	3,401,852	-29,693	-0.22%	5	5
EU-27	2,285,851	2,494,190	208,339	2.20%	3	3
OECD	6,132,405	7,174,266	1,041,861	4.00%	6	7

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 18 (of 27) countries with available data
 OECD rankings out of 28 (of 42) countries with available data

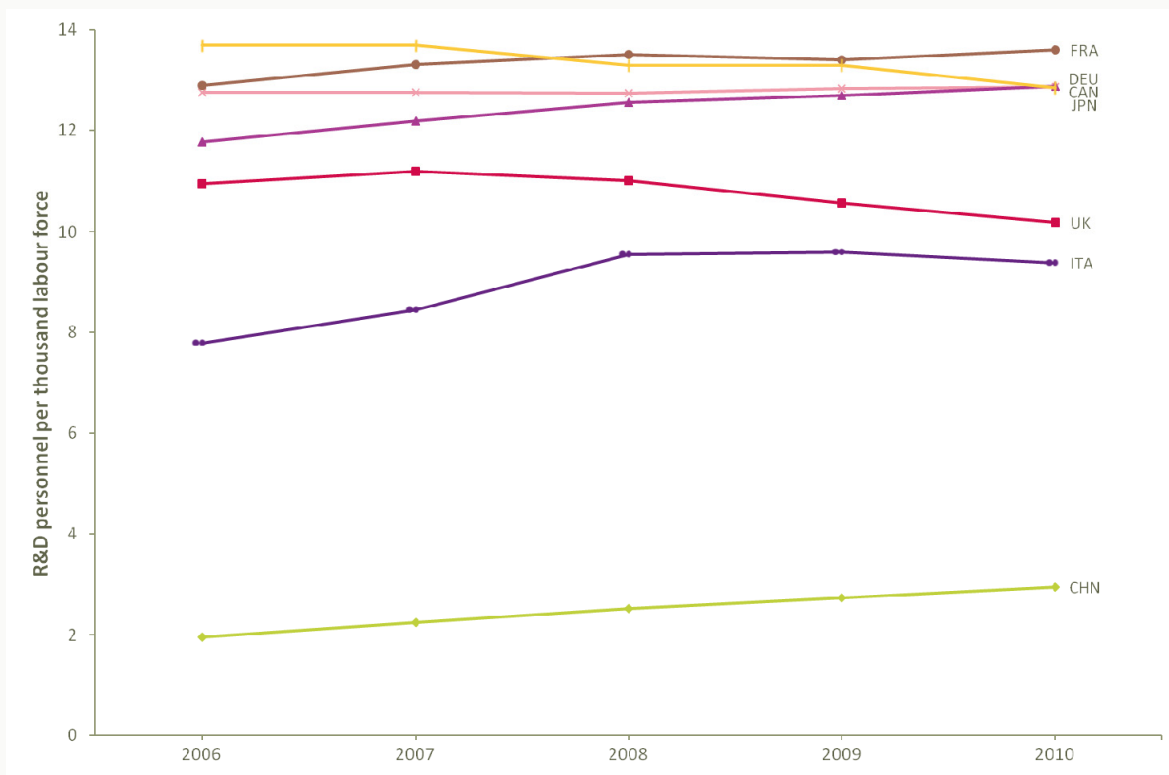
R&D personnel per thousand population – UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	5.53	5.13	-0.40	-1.85%	-	-
G8	6.06	5.99	-0.07	-0.29%	6	6
EU-27	4.75	5.13	0.38	1.93%	7	11
OECD	2.77	3.18	0.41	3.52%	14	19

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 18 (of 27) countries with available data
 OECD rankings out of 28 (of 42) countries with available data

R&D personnel per thousand labour force – UK and comparator countries

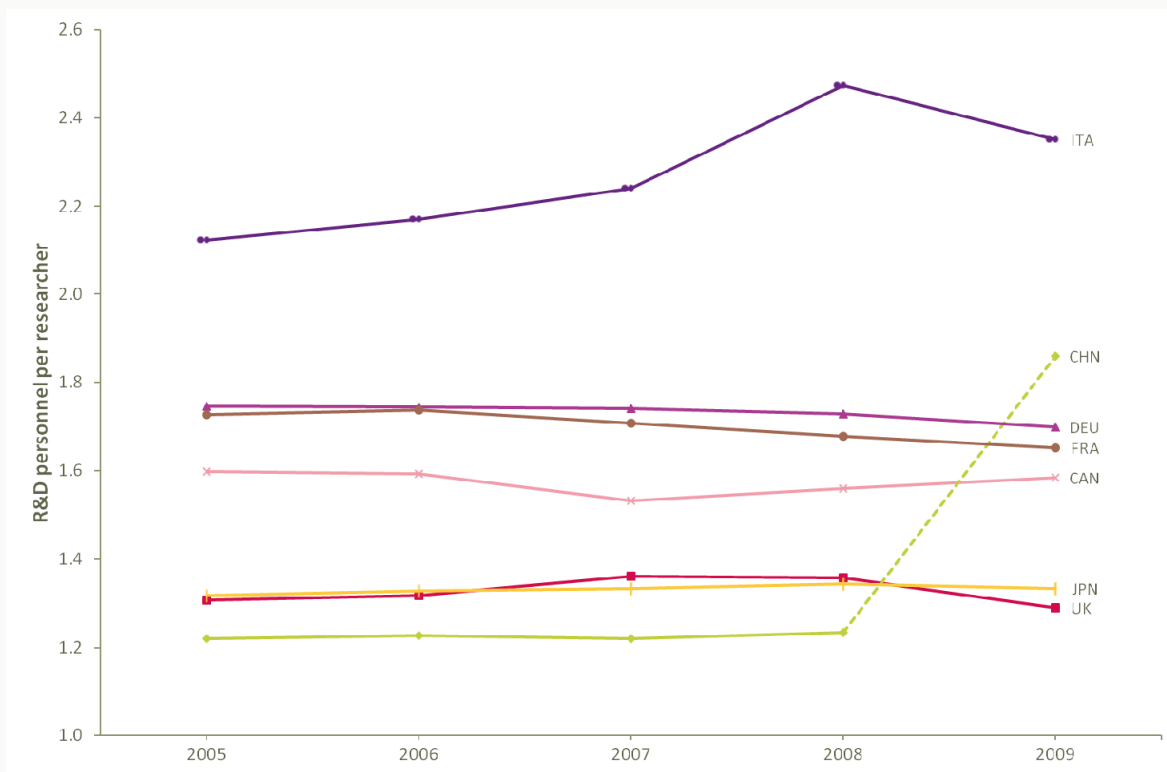


Source: OECD MSTI

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	11.0	10.2	-0.8	-1.79%	-	-
G8	12.0	12.1	0.1	0.25%	5	5
EU-27	10.5	11.2	0.7	1.69%	8	8
OECD	4.6	5.5	0.9	4.38%	13	15

G8 rankings out of 6 (of 8) countries with available data
 EU27 rankings out of 15 (of 27) countries with available data
 OECD rankings out of 24 (of 42) countries with available data

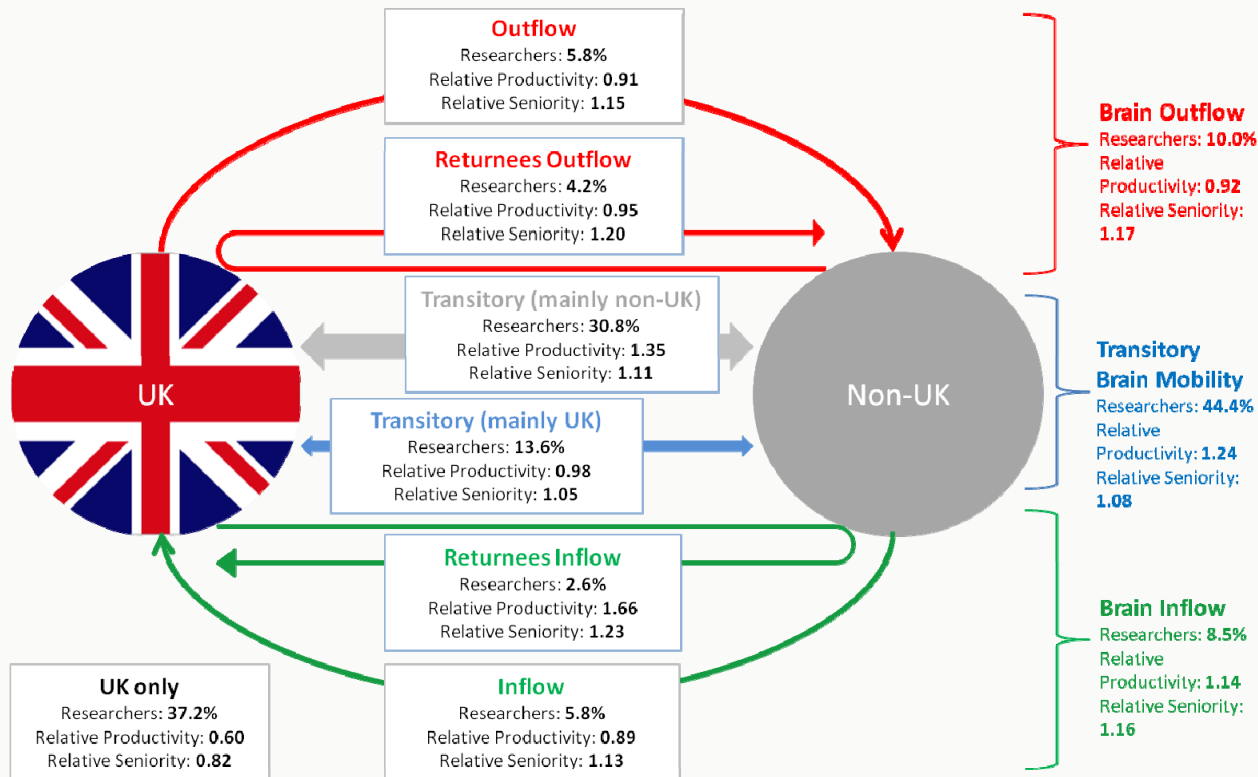
R&D personnel per researcher – UK and comparator countries



	2005	2009	Change 05-09	CAGR 05-09	UK rank 2005	UK rank 2009
UK	1.31	1.29	-0.02	-0.33%	-	-
G8	1.61	1.60	-0.01	-0.14%	7	7
EU-27	1.60	1.60	0.00	-0.01%	20	18
OECD	1.47	1.64	0.17	2.71%	26	25

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 22 (of 27) countries with available data
 OECD rankings out of 31 (of 42) countries with available data

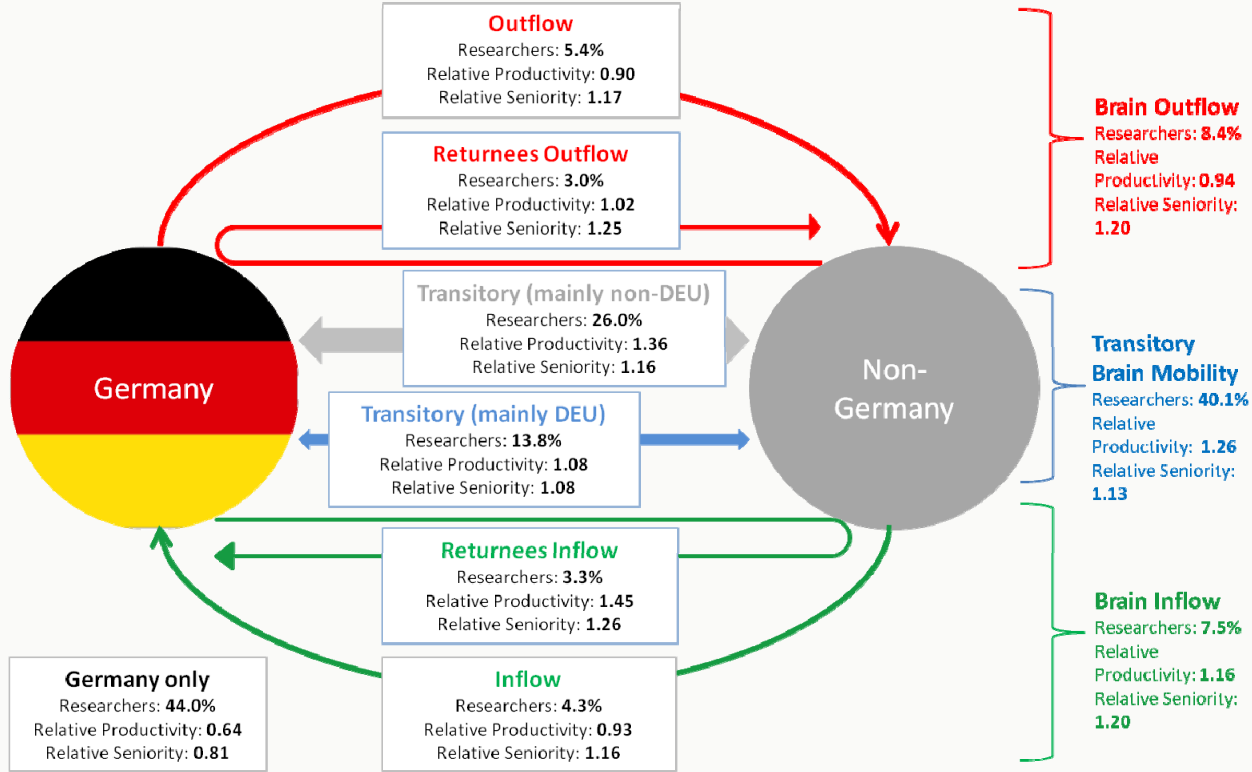
International mobility of UK researchers



International mobility of UK researchers – top source/destination countries

Outflow		Inflow		Returnees Outflow		Returnees Inflow		Transitory (mainly UK)		Transitory (mainly non-UK)	
USA	28.2%	USA	26.6%	USA	17.8%	USA	49.1%	USA	29.2%	USA	25.4%
AUS	10.4%	DEU	10.1%	AUS	10.8%	AUS	5.3%	AUS	6.9%	DEU	7.6%
CAN	6.9%	AUS	6.6%	DEU	9.7%	CAN	3.8%	DEU	5.9%	FRA	5.9%
DEU	4.9%	FRA	6.1%	FRA	8.3%	DEU	3.6%	CAN	5.6%	ITA	5.0%
FRA	4.3%	ITA	5.2%	CAN	7.2%	IRL	2.8%	FRA	4.2%	AUS	4.6%

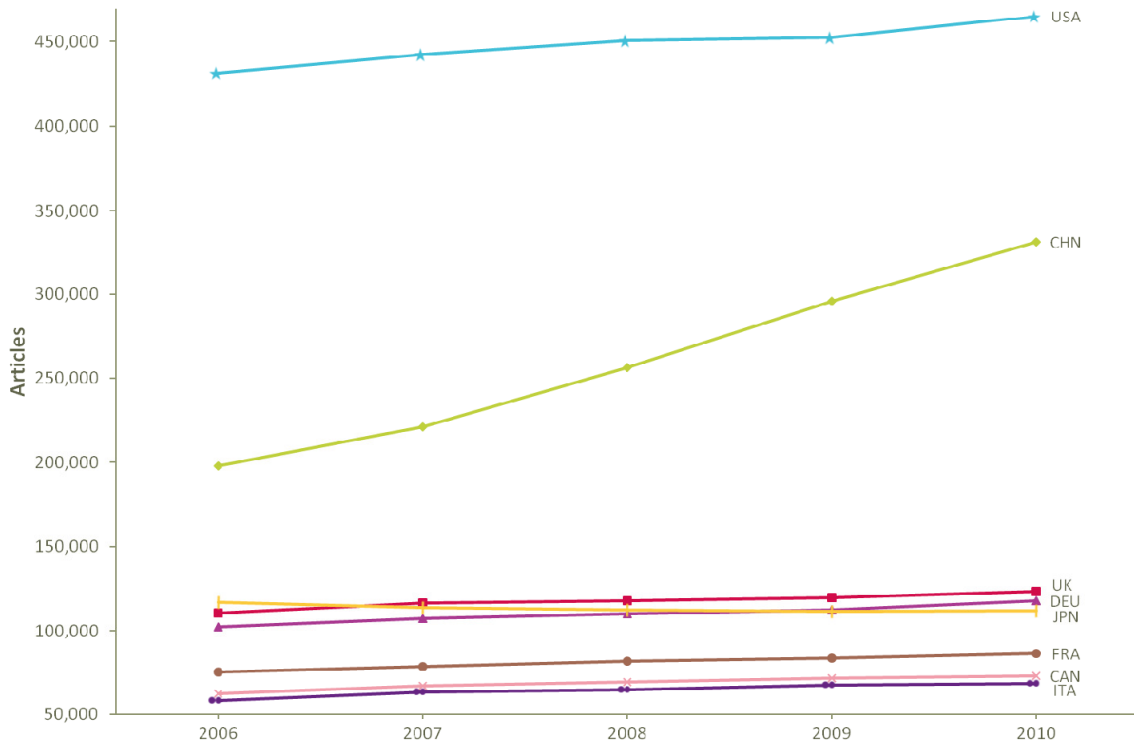
International mobility of German researchers



International mobility of German researchers - top source/destination countries

Outflow		Inflow		Returnees Outflow		Returnees Inflow		Transitory (mainly Germany)		Transitory (mainly non-Germany)	
USA	25.5%	USA	23.5%	USA	17.0%	USA	44.7%	USA	25.7%	USA	22.3%
CHE	13.9%	CHE	10.7%	CHE	9.1%	GBR	10.4%	GBR	8.6%	GBR	6.9%
GBR	10.7%	GBR	7.0%	GBR	7.2%	CHE	6.8%	CHE	6.9%	FRA	6.8%
AUT	6.6%	AUT	5.9%	FRA	6.8%	FRA	5.0%	FRA	4.9%	CHE	5.2%
FRA	4.7%	RUS	5.9%	AUT	6.2%	NLD	4.5%	NLD	3.5%	CHN	4.9%

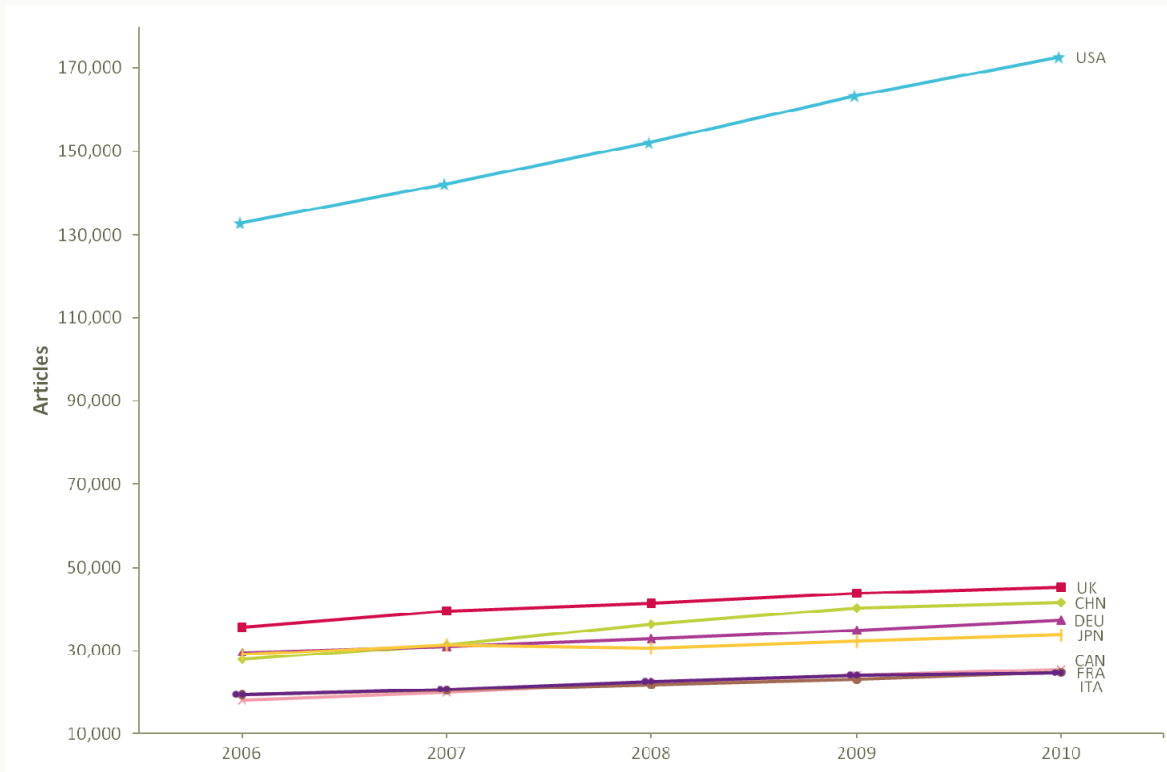
Article output



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	110,413	123,594	13,181	2.90%	-	-
G8	894,930	967,150	72,220	1.96%	3	2
EU-27	505,850	586,749	80,899	3.80%	1	1
OECD	1,415,981	1,698,210	282,229	4.60%	4	3
World	1,656,611	1,935,954	279,343	4.00%	4	3

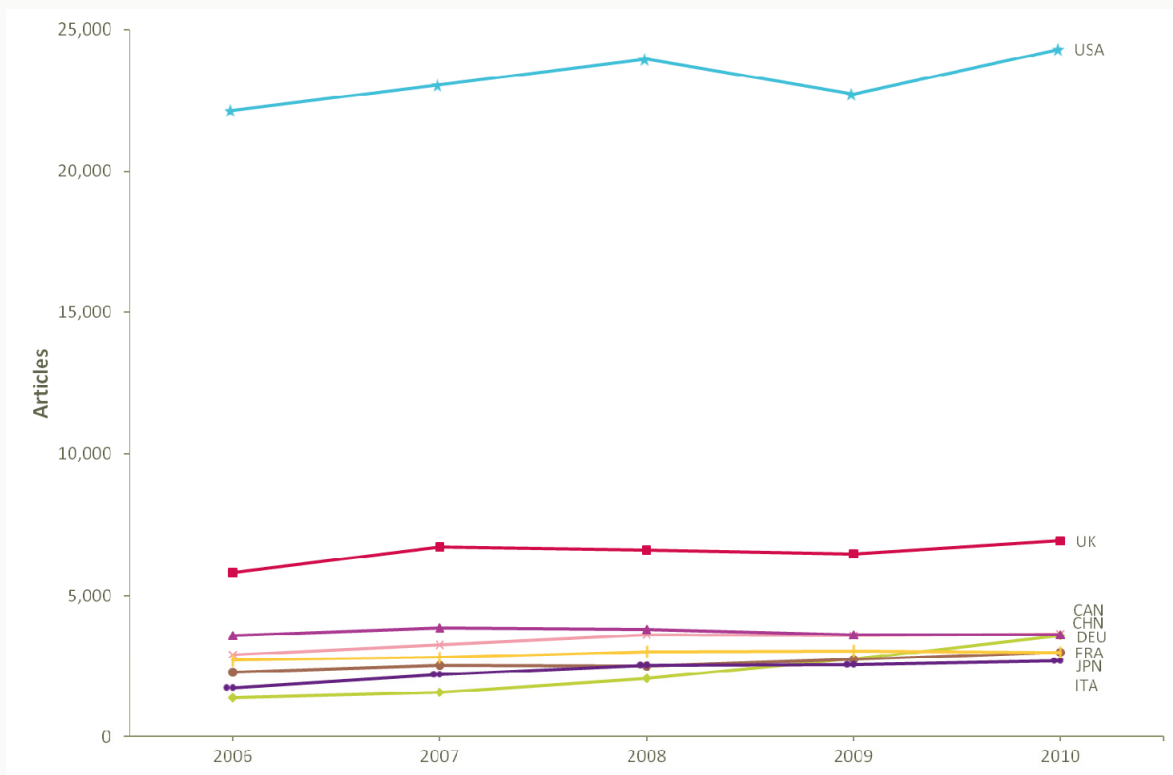
Source: Scopus

Article output – Clinical Sciences (BIS1)



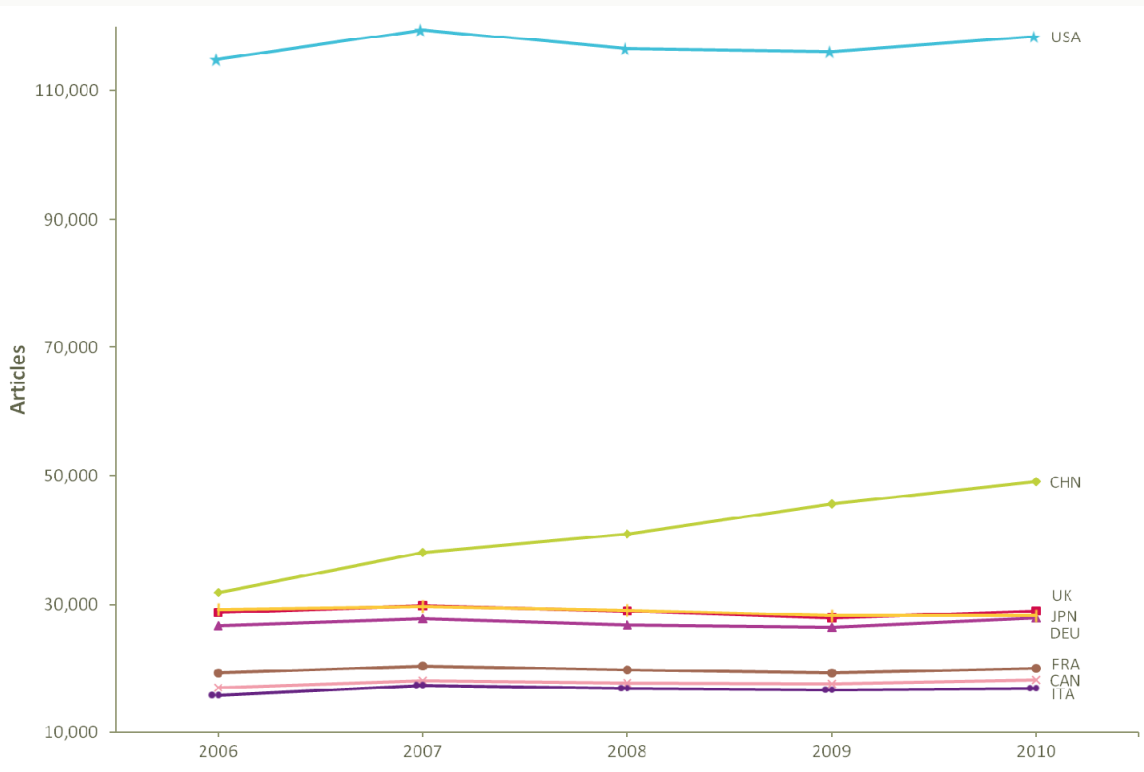
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	35,725	45,232	9,507	6.10%	-	-
G8	262,106	329,312	67,206	5.87%	2	2
EU-27	154,900	192,921	38,021	5.60%	1	1
OECD	389,601	501,214	111,613	6.50%	2	2
World	445,107	569,626	124,519	6.40%	2	2

Article output – Health & Medical Sciences (BIS2)



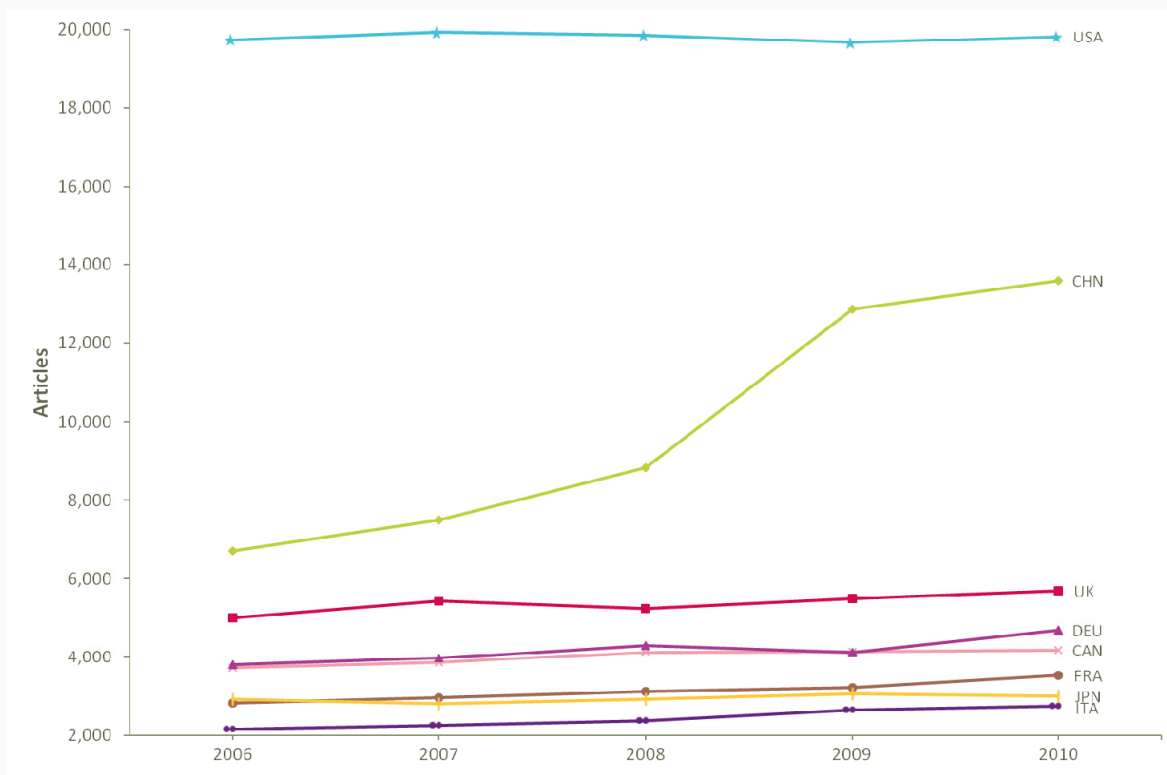
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	5,822	6,931	1,109	4.50%	-	-
G8	38,487	44,231	5,744	3.54%	2	2
EU-27	20,204	25,421	5,217	5.90%	1	1
OECD	55,127	71,204	16,077	6.60%	2	2
World	63,987	82,011	18,024	6.40%	2	2

Article output – Biological Sciences (BIS3)



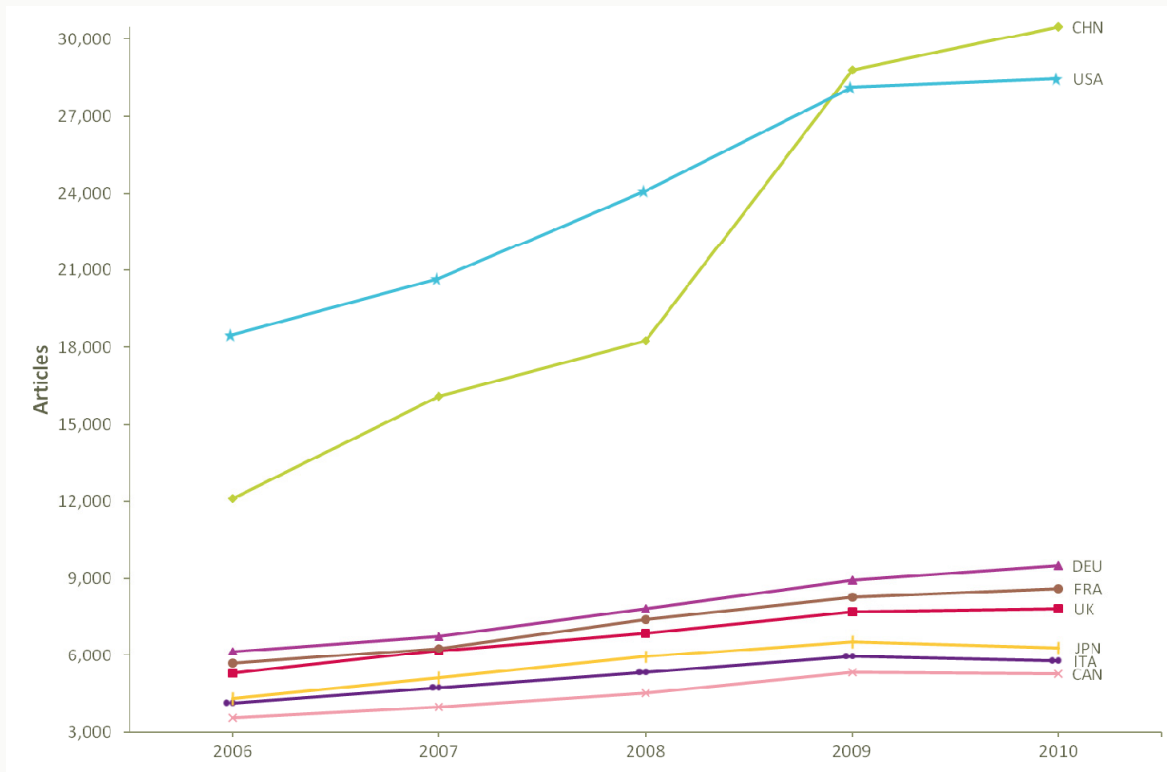
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	28,719	29,043	324	0.30%	-	-
G8	228,603	230,892	2,289	0.25%	3	2
EU-27	134,941	137,688	2,747	0.50%	1	1
OECD	351,006	380,368	29,632	2.00%	4	3
World	381,709	416,344	34,635	2.20%	4	3

Article output – Environmental Sciences (BIS4)



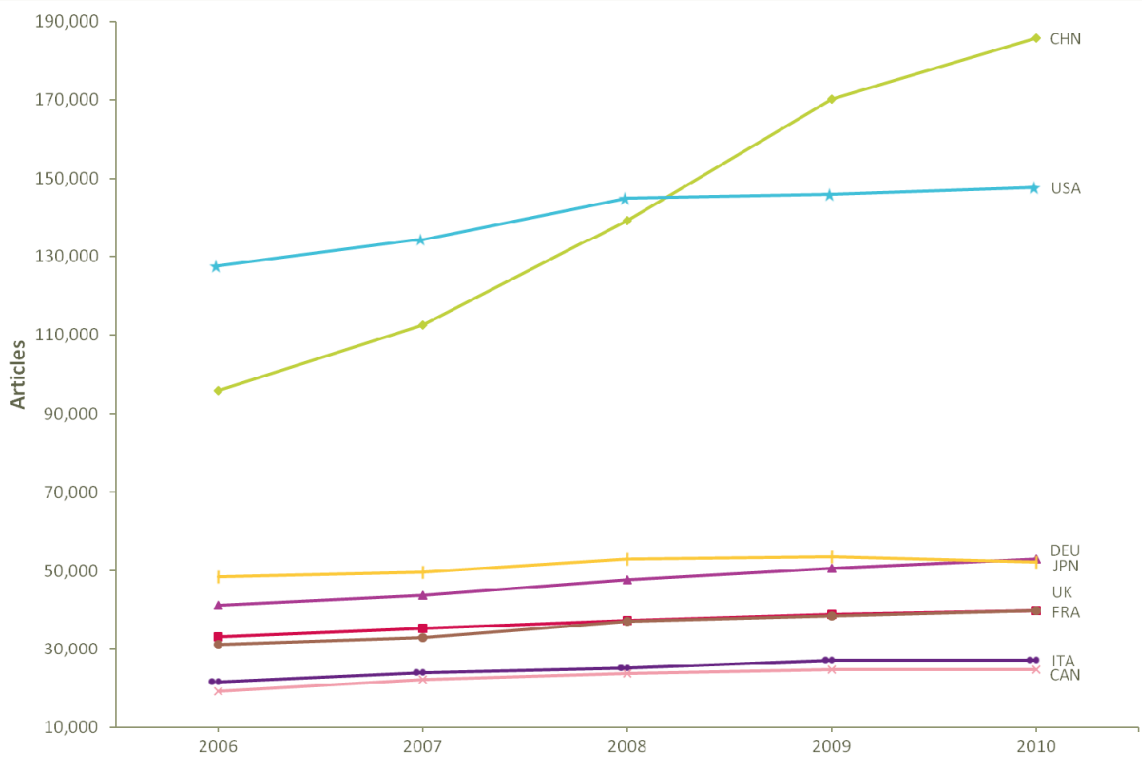
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	5,003	5,689	686	3.30%	-	-
G8	37,364	40,111	2,747	1.79%	2	2
EU-27	22,465	27,951	5,486	5.60%	1	1
OECD	61,128	76,145	15,017	5.60%	3	3
World	69,162	85,971	16,809	5.60%	3	3

Article output – Mathematics (BIS5)



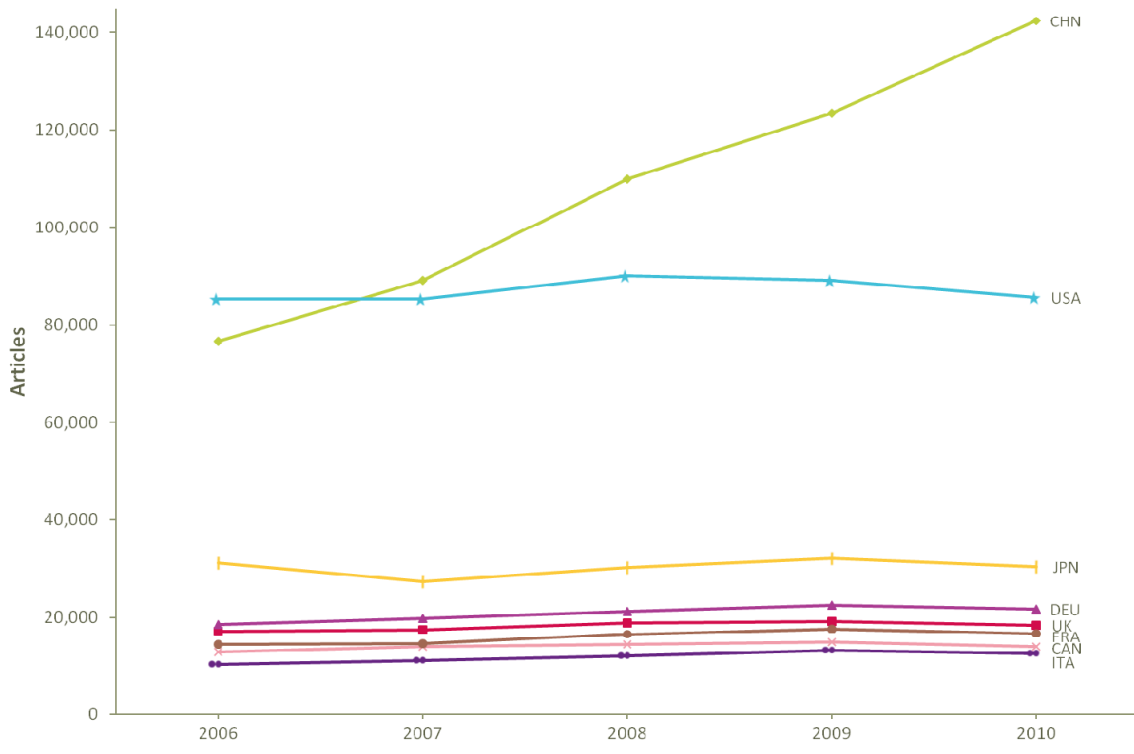
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	5,281	7,842	2,521	10.40%	-	-
G8	45,035	67,858	22,823	10.79%	4	4
EU-27	32,216	47,868	15,652	10.40%	3	3
OECD	76,284	124,159	47,875	13.00%	5	5
World	83,975	137,188	53,213	13.10%	5	5

Article output – Physical Sciences (BIS6)



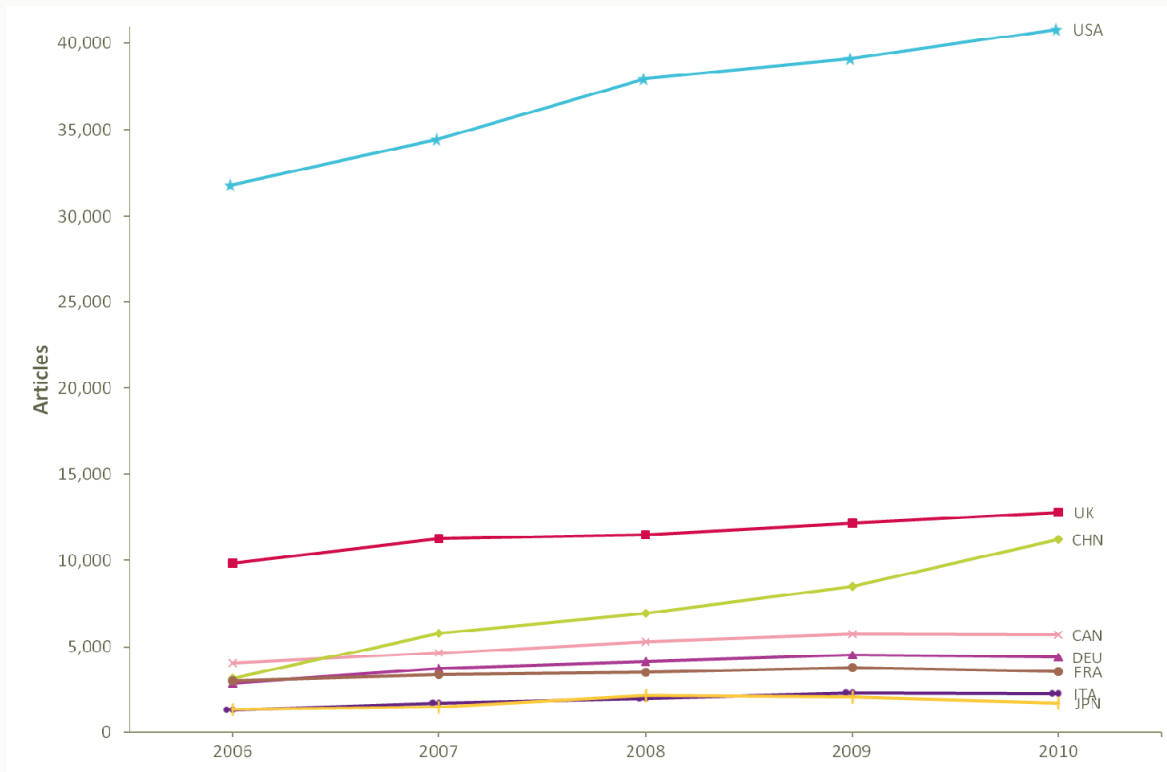
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	33,223	39,916	6,693	4.70%	-	-
G8	303,003	357,692	54,689	4.24%	4	4
EU-27	179,410	228,627	49,217	6.20%	2	2
OECD	506,537	683,315	176,778	7.80%	5	5
World	567,902	762,808	194,906	7.70%	5	5

Article output – Engineering (BIS7)



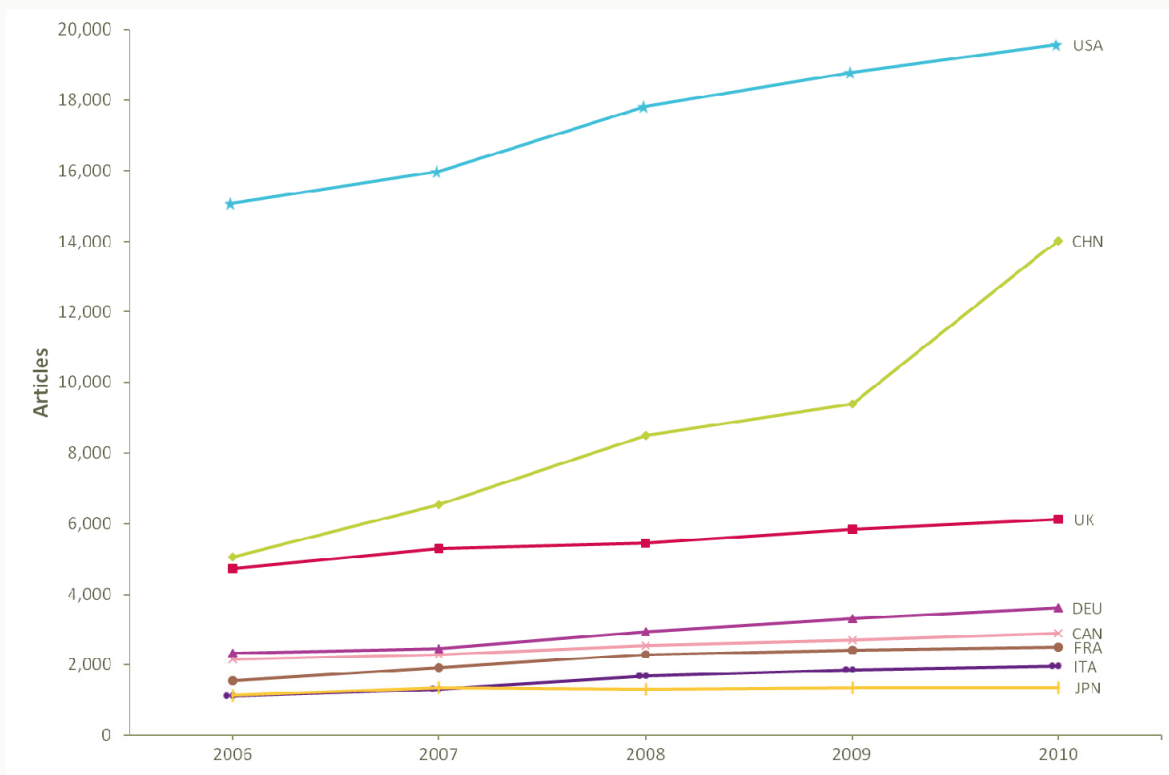
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	17,087	18,360	1,273	1.80%	-	-
G8	182,417	192,224	9,807	1.32%	4	4
EU-27	91,579	109,347	17,768	4.50%	2	2
OECD	322,155	413,574	91,419	6.40%	5	5
World	395,856	478,802	82,946	4.90%	5	5

Article output – Social Sciences (BIS8)



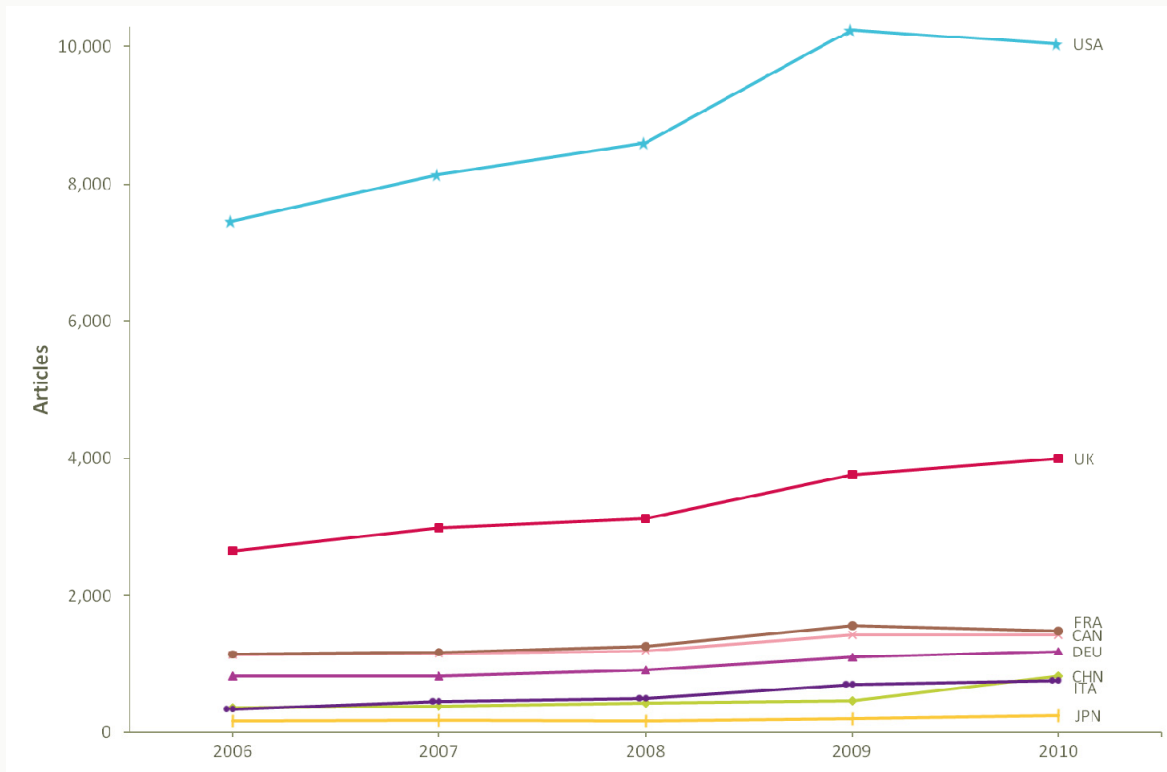
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	9,863	12,808	2,945	6.70%	-	-
G8	52,621	68,494	15,873	6.81%	2	2
EU-27	24,785	36,584	11,799	10.20%	1	1
OECD	71,453	106,735	35,282	10.60%	2	2
World	93,711	128,759	35,048	8.30%	2	2

Article output – Business (BIS9)



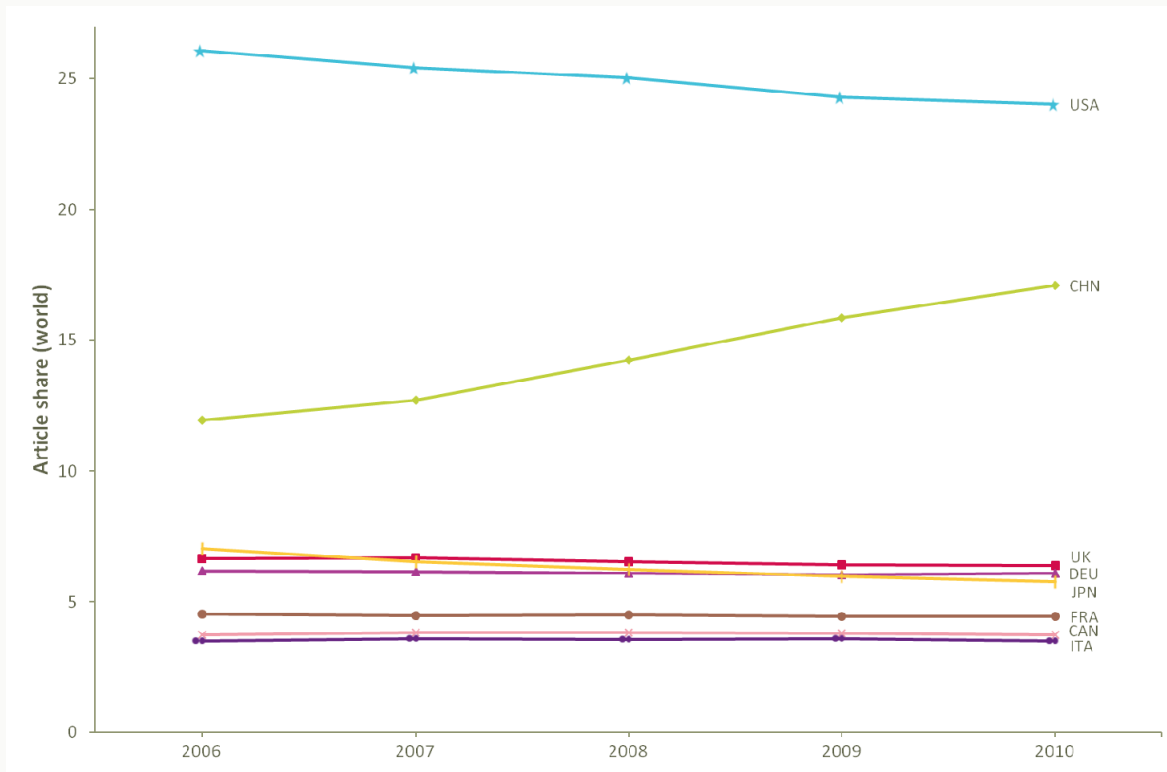
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	4,731	6,129	1,398	6.70%	-	-
G8	26,284	35,271	8,987	7.63%	2	2
EU-27	14,913	22,604	7,691	11.00%	1	1
OECD	40,597	63,232	22,635	11.70%	3	3
World	57,282	78,099	20,817	8.10%	3	3

Article output – Humanities (BIS10)



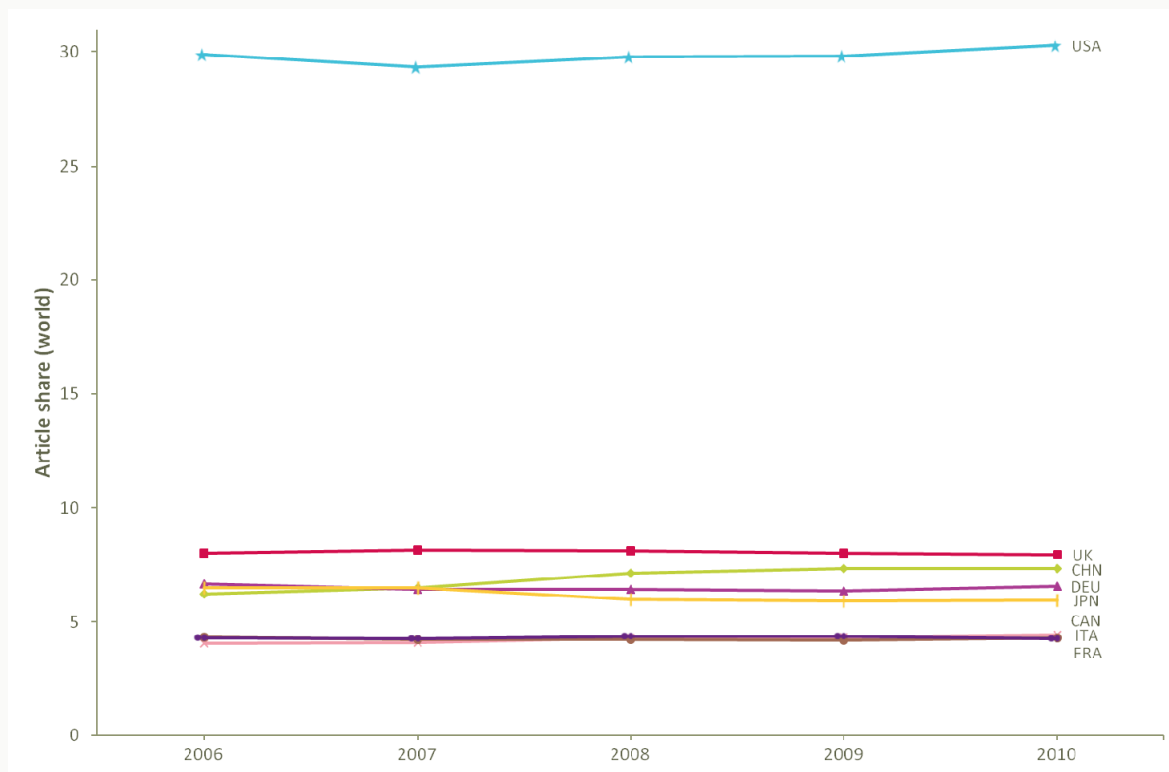
	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	2,653	3,999	1,346	10.80%	-	-
G8	13,507	18,757	5,250	8.56%	2	2
EU-27	7,108	11,220	4,112	12.10%	1	1
OECD	17,698	26,442	8,744	10.60%	2	2
World	33,933	37,118	3,185	2.30%	2	2

Article share (world)



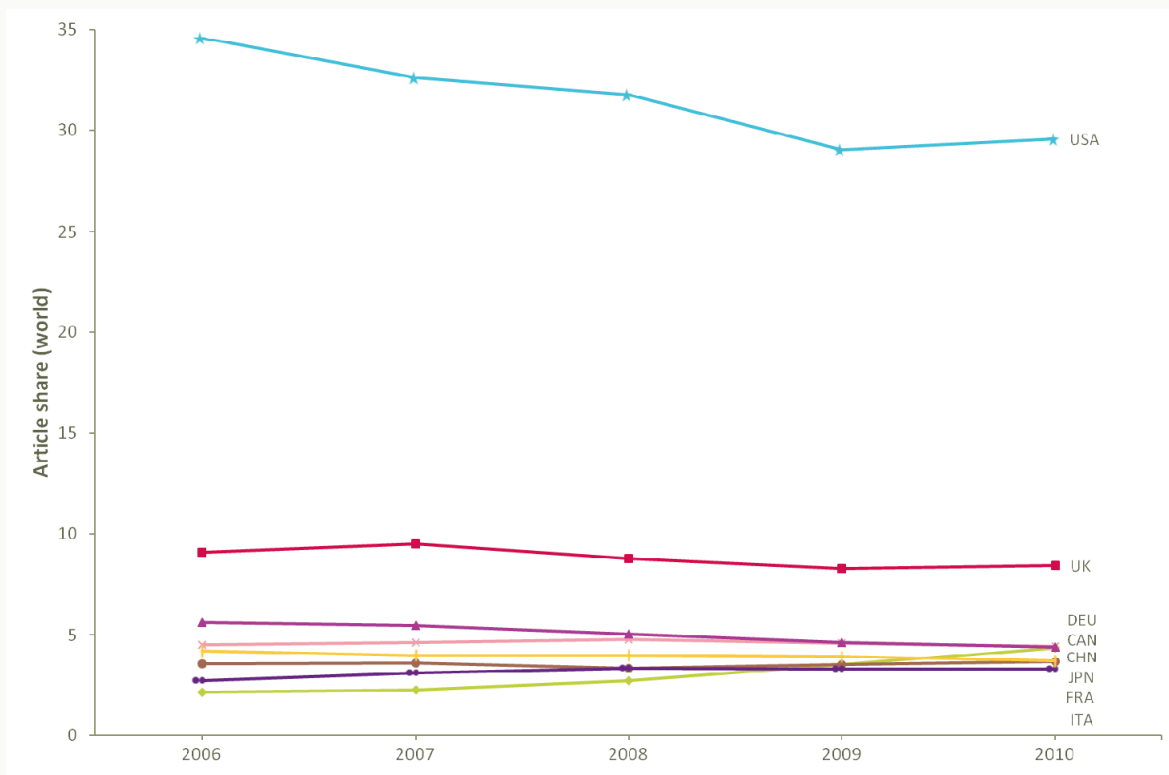
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	6.67%	6.38%	-0.28%	-1.07%	-	-
G8	54.02%	49.96%	-4.06%	-1.94%	3	2
EU-27	30.54%	30.31%	-0.23%	-0.19%	1	1
OECD	85.48%	87.72%	2.25%	0.65%	4	3
World	100%	100%	-	-	4	3

Article share (world) – Clinical Sciences (BIS1)



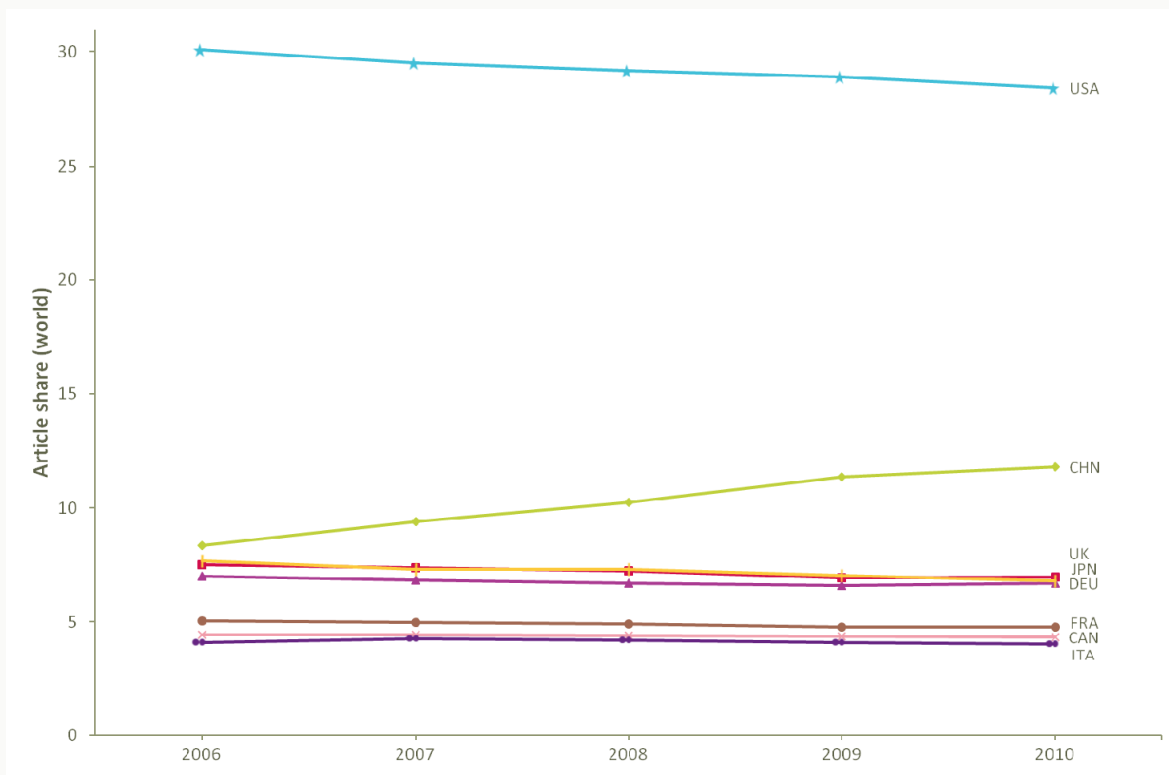
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	8.03%	7.94%	-0.09%	-0.27%	-	-
G8	58.89%	57.81%	-1.07%	-0.46%	2	2
EU-27	34.80%	33.87%	-0.93%	-0.68%	1	1
OECD	87.53%	87.99%	0.46%	0.13%	2	2
World	100%	100%	-	-	2	2

Article share (world) – Health & Medical Sciences (BIS2)



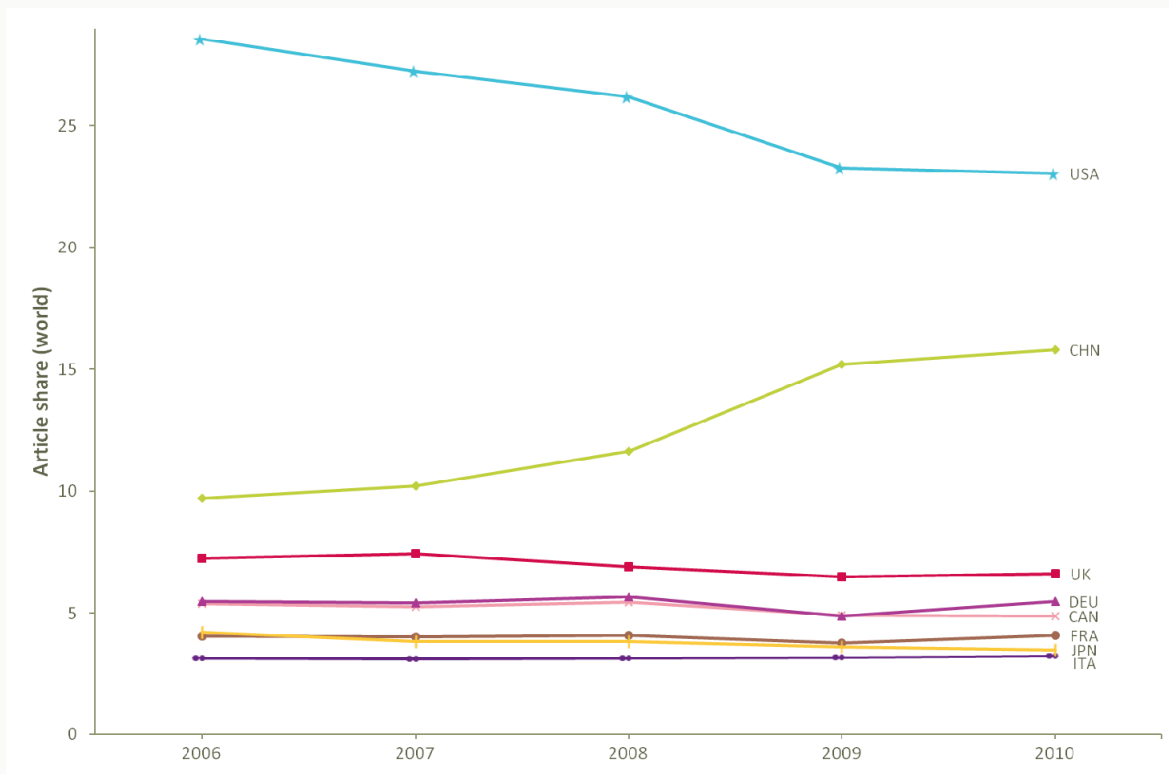
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	9.10%	8.45%	-0.65%	-1.83%	-	-
G8	60.15%	53.93%	-6.22%	-2.69%	2	2
EU-27	31.58%	31.00%	-0.58%	-0.46%	1	1
OECD	86.15%	86.82%	0.67%	0.19%	2	2
World	100%	100%	-	-	2	2

Article share (world) – Biological Sciences (BIS3)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	7.52%	6.98%	-0.55%	-1.87%	-	-
G8	59.89%	55.46%	-4.43%	-1.90%	3	2
EU-27	35.35%	33.07%	-2.28%	-1.65%	1	1
OECD	91.96%	91.36%	-0.60%	-0.16%	4	3
World	100%	100%	-	-	4	3

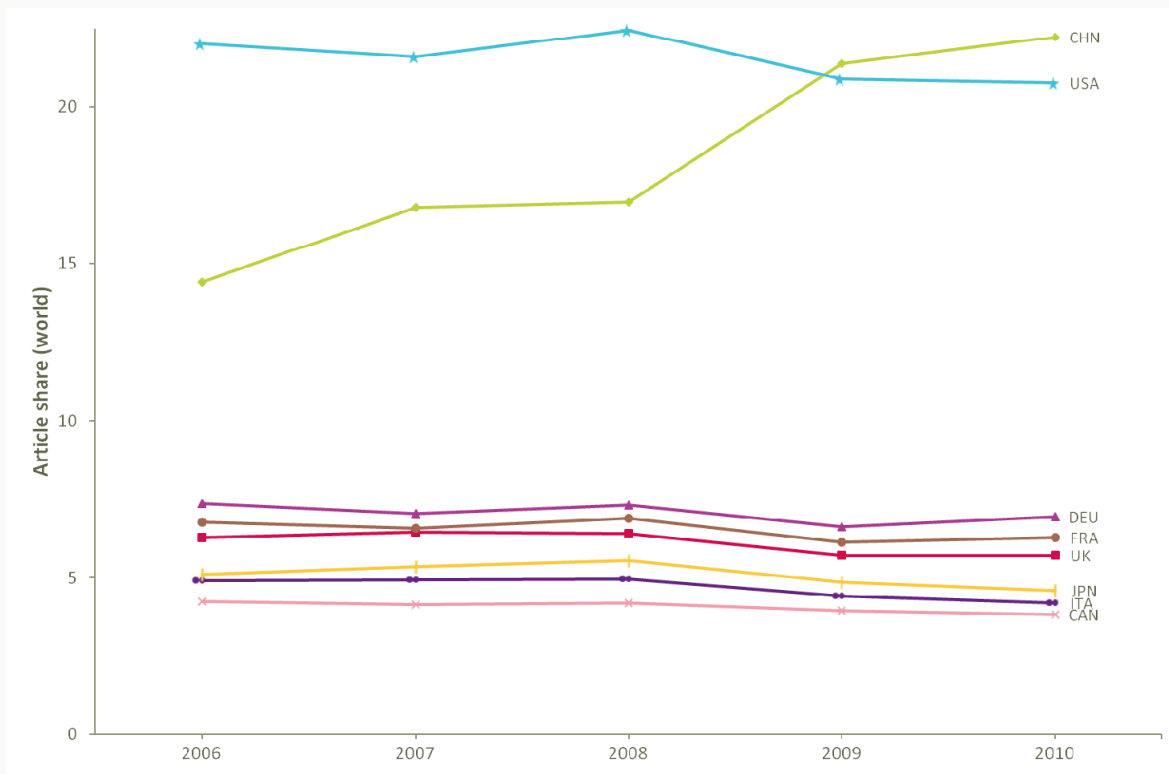
Article share (world) – Environmental Sciences (BIS4)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	7.23%	6.62%	-0.61%	-2.20%	-	-
G8	54.02%	46.66%	-7.37%	-3.60%	2	2
EU-27	32.48%	32.51%	0.03%	0.02%	1	1
OECD	88.38%	88.57%	0.19%	0.05%	3	3
World	100%	100%	-	-	3	3

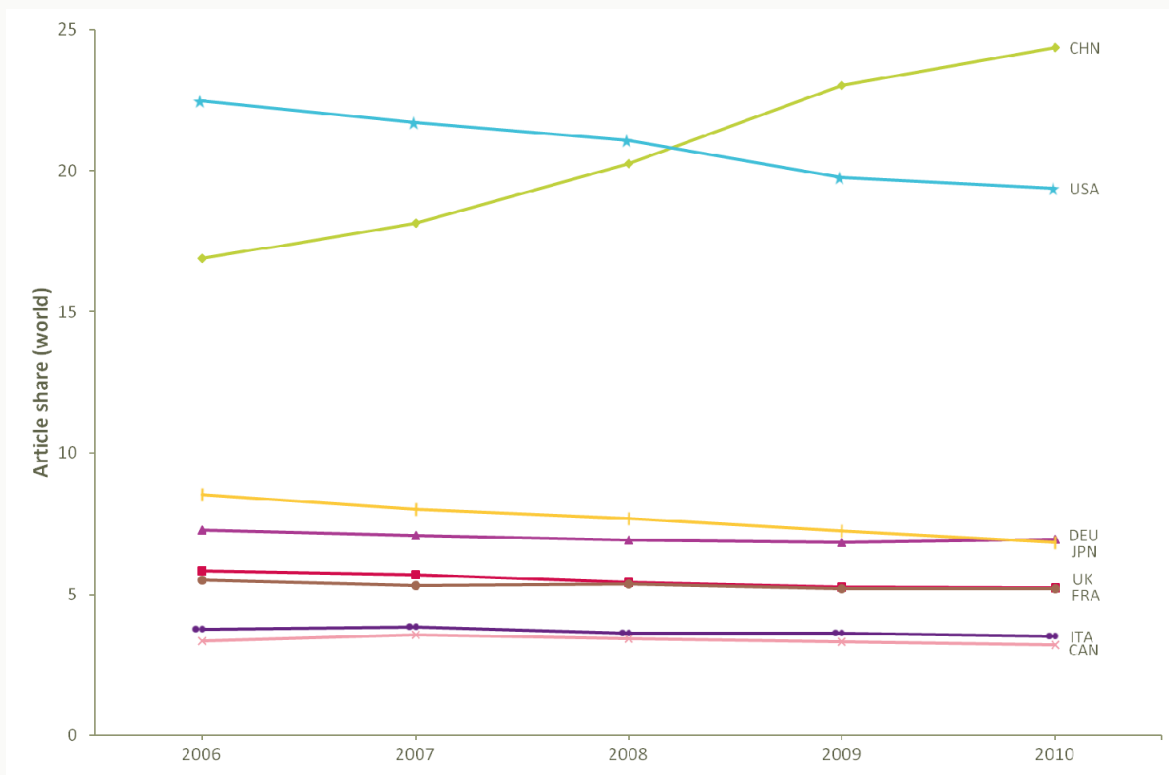
Source: Scopus

Article share (world) – Mathematics (BIS5)



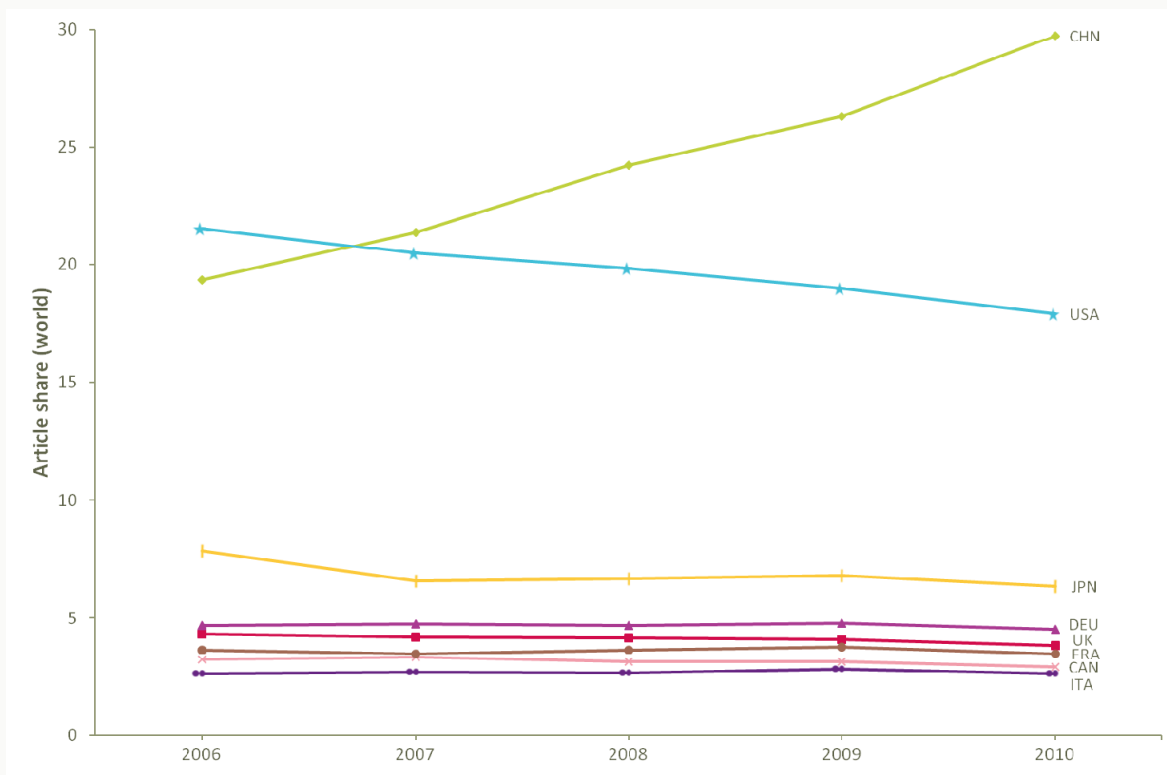
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	6.29%	5.72%	-0.57%	-2.36%	-	-
G8	53.63%	49.46%	-4.17%	-2.00%	4	4
EU-27	38.36%	34.89%	-3.47%	-2.34%	1	1
OECD	90.84%	90.50%	-0.34%	-0.09%	3	3
World	100%	100%	-	-	3	3

Article share (world) – Physical Sciences (BIS6)



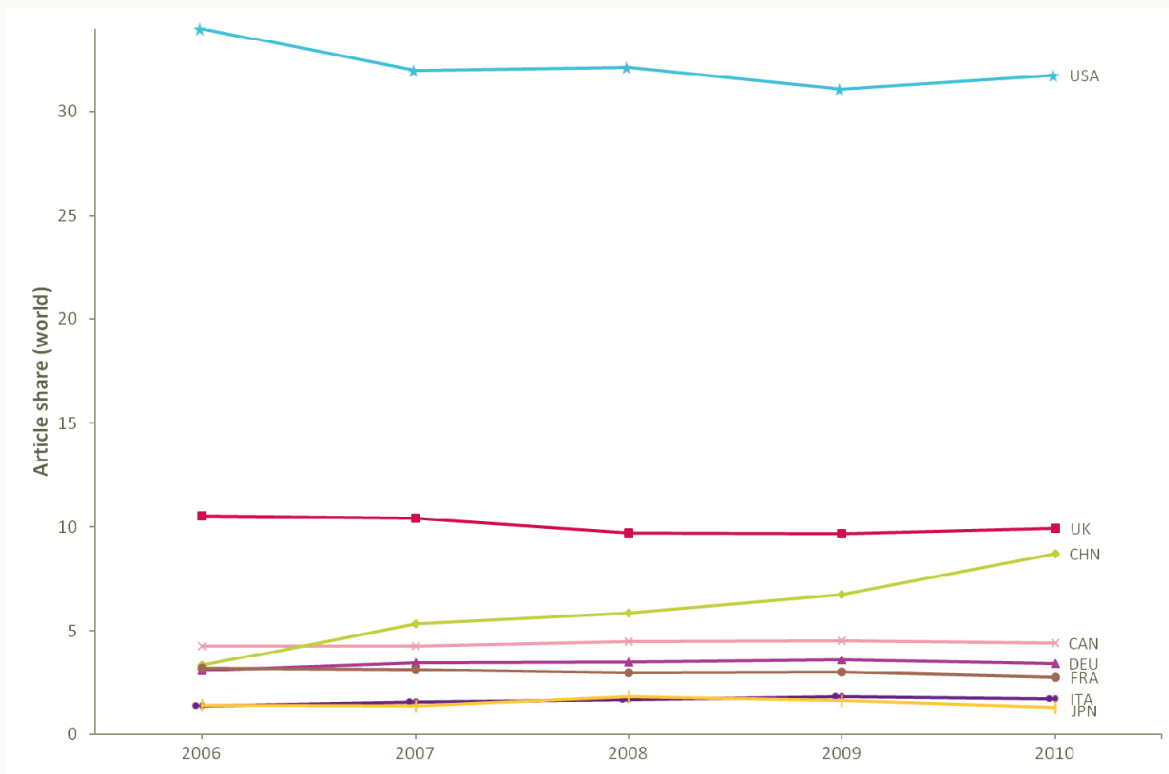
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	5.85%	5.23%	-0.62%	-2.75%	-	-
G8	53.35%	46.89%	-6.46%	-3.18%	4	4
EU-27	31.59%	29.97%	-1.62%	-1.31%	2	2
OECD	89.19%	89.58%	0.38%	-0.11%	5	5
World	100%	100%	-	-	5	5

Article share (world) – Engineering (BIS7)



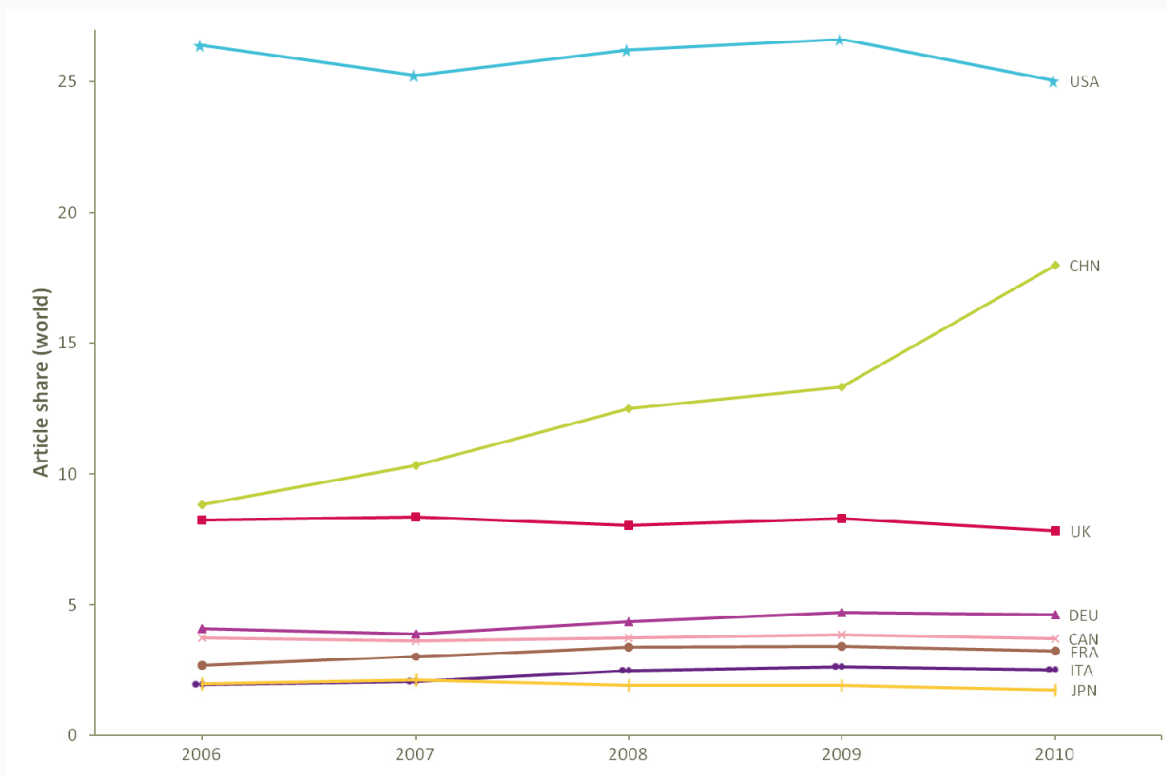
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	4.32%	3.84%	-0.48%	-2.91%	-	-
G8	46.08%	40.15%	-5.93%	-3.39%	4	4
EU-27	23.13%	22.84%	-0.31%	-0.32%	2	2
OECD	81.38%	86.38%	5.00%	-1.50%	5	5
World	100%	100%	-	-	5	5

Article share (world) – Social Sciences (BIS8)



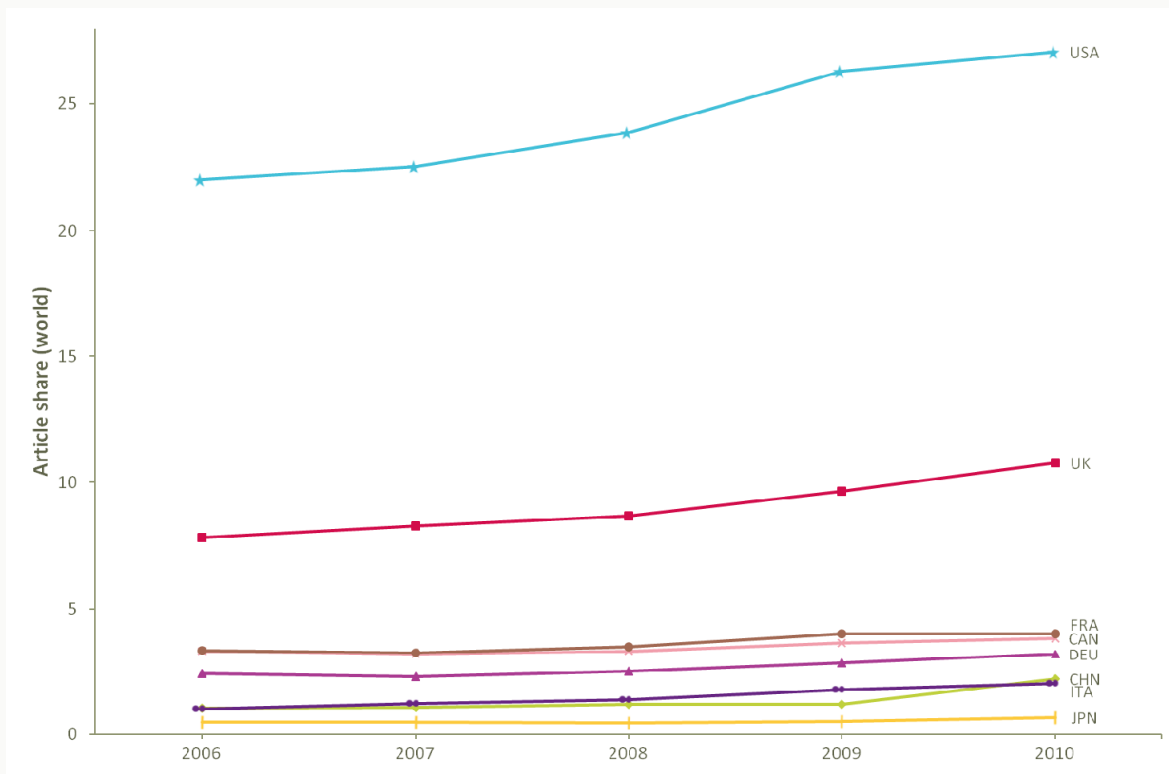
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	10.53%	9.95%	-0.58%	-1.40%	-	-
G8	56.15%	53.20%	-2.96%	-1.34%	2	2
EU-27	26.45%	28.41%	1.97%	1.81%	1	1
OECD	76.25%	82.90%	6.65%	2.11%	2	2
World	100%	100%	-	-	2	2

Article share (world) – Business (BIS9)



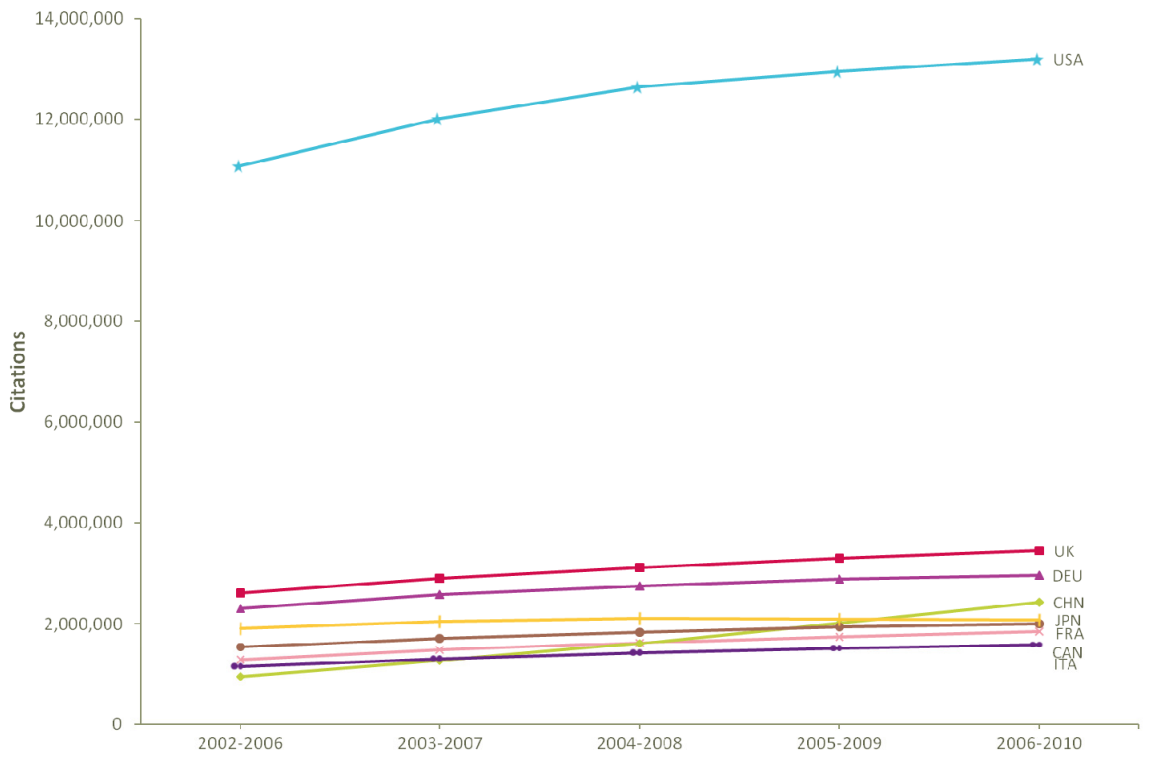
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	8.26%	7.85%	-0.41%	-1.27%	-	-
G8	45.89%	45.16%	-0.72%	-0.40%	2	2
EU-27	26.03%	28.94%	2.91%	2.68%	1	1
OECD	70.87%	80.96%	10.09%	3.38%	3	3
World	100%	100%	-	-	3	3

Article share (world) – Humanities (BIS10)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	7.82%	10.78%	2.96%	8.35%	-	-
G8	39.80%	50.53%	10.73%	6.15%	2	2
EU-27	20.95%	30.23%	9.28%	9.60%	1	1
OECD	52.16%	71.24%	19.08%	8.11%	2	2
World	100%	100%	-	-	2	2

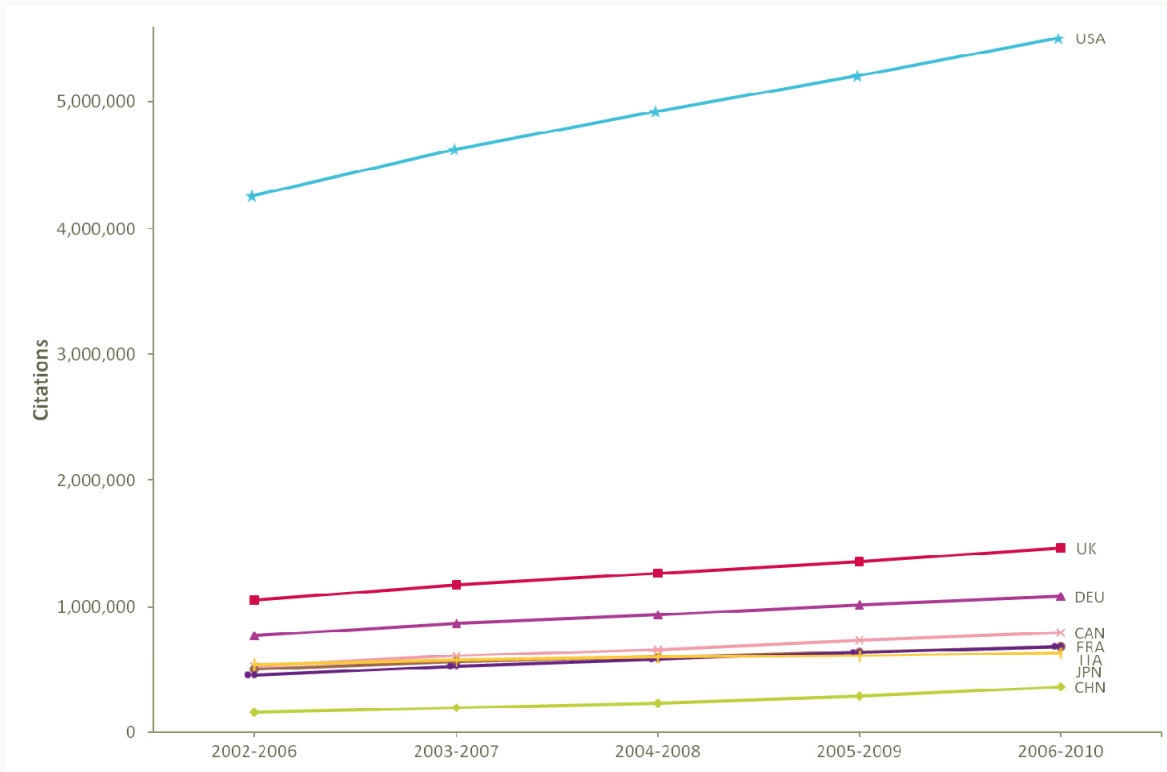
Citation output



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	2.617m	3.460m	842,925	7.20%	-	-
G8	18.995m	22.653m	3.658m	4.50%	2	2
EU-27	9.635m	12.498m	2.863m	6.70%	1	1
OECD	23.875m	30.368m	6.493m	6.20%	2	2
World	24.956m	31.828m	6.872m	6.30%	2	2

Source: Scopus

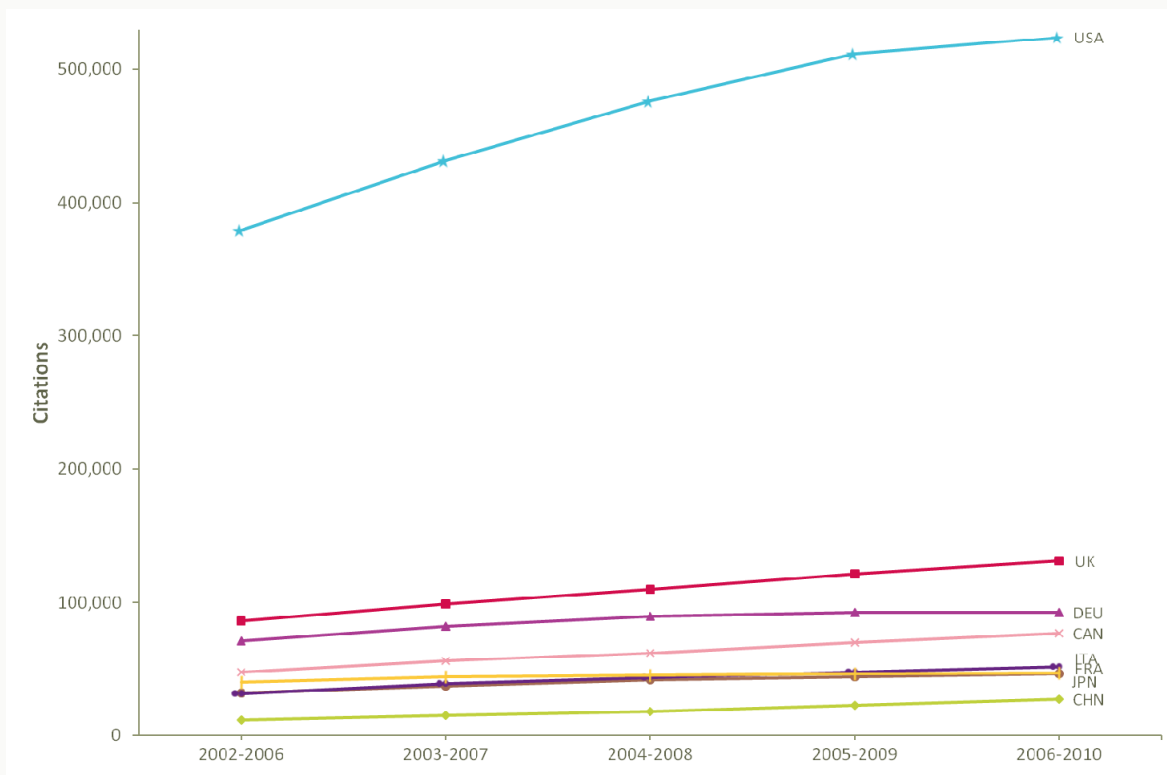
Citation output – Clinical Sciences (BIS1)



Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.055m	1.468m	413,622	8.60%	-	-
G8	7.045m	8.975m	1.930m	6.24%	2	2
EU-27	3.530m	4.792m	1.261m	7.90%	1	1
OECD	8.644m	11.278m	2.635m	6.90%	2	2
World	9.043m	11.732m	2.690m	6.70%	2	2

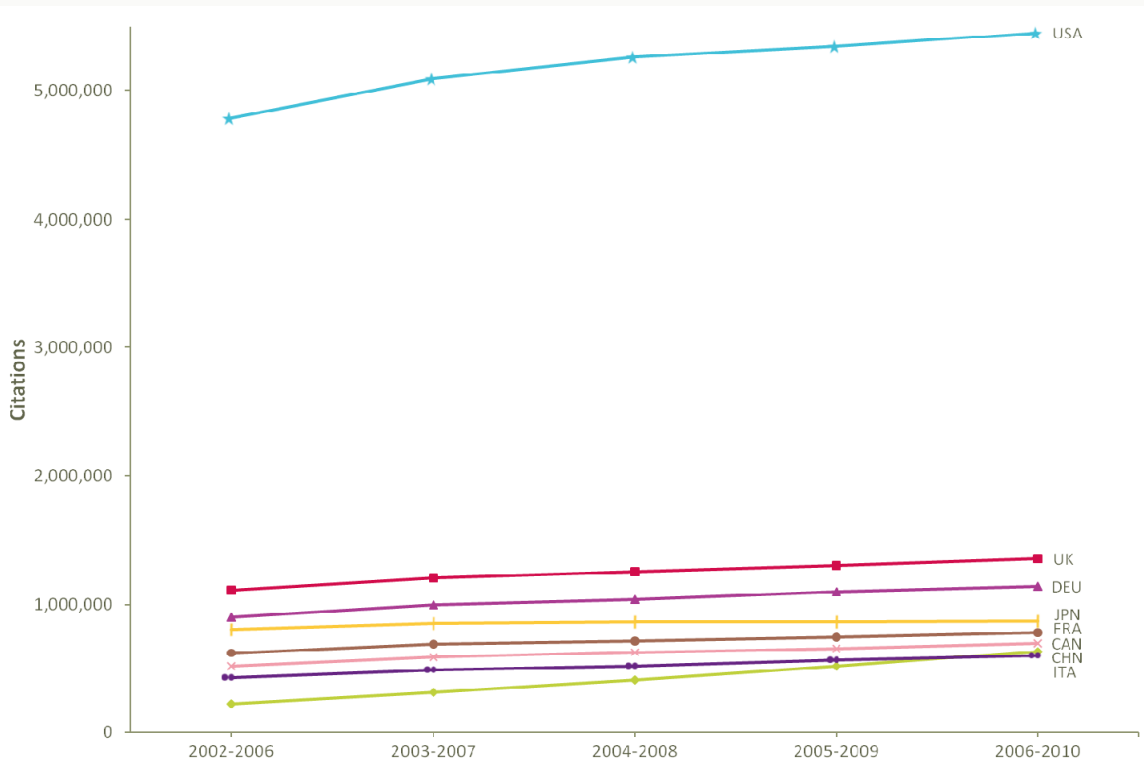
Citation output – Health & Medical Sciences (BIS2)



Source: Scopus

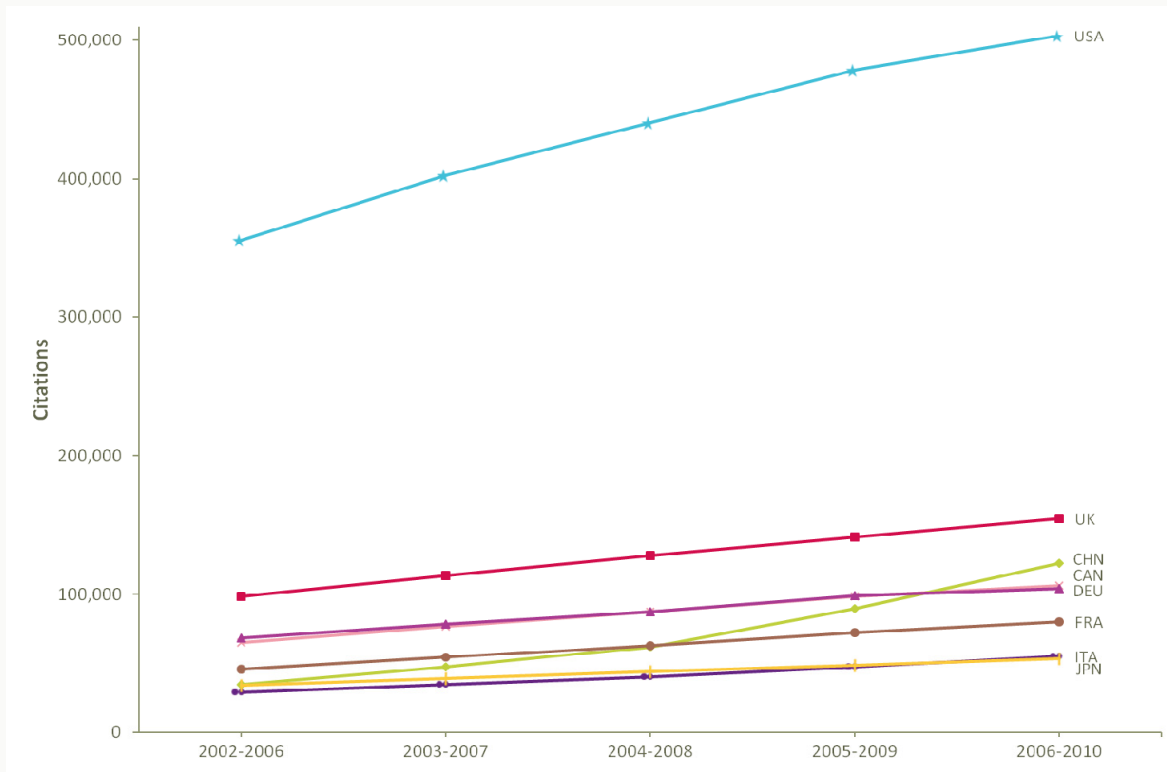
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	86,283	131,214	44,931	11.00%	-	-
G8	618,473	849,960	231,487	8.27%	2	2
EU-27	307,408	446,474	139,066	9.80%	1	1
OECD	788,583	1.133m	344,399	9.50%	2	2
World	831,938	1.195m	363,316	9.50%	2	2

Citation output – Biological Sciences (BIS3)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.112m	1.357m	245,890	5.10%	-	-
G8	7.935m	9.023m	1.088m	3.27%	2	2
EU-27	3.920m	4.851m	931,538	5.50%	1	1
OECD	9.727m	11.643m	1.917m	4.60%	2	2
World*	10.019m	12.037m	2.018m	4.70%	2	2

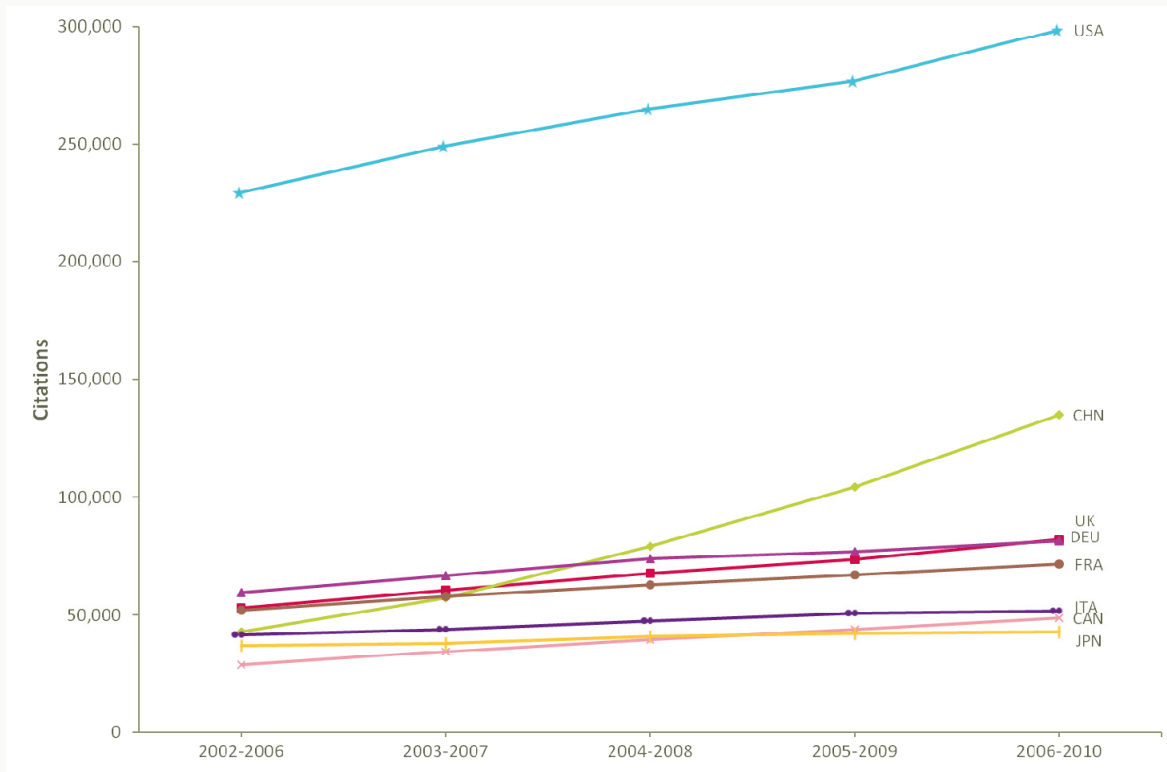
Citation output – Environmental Sciences (BIS4)



Source: Scopus

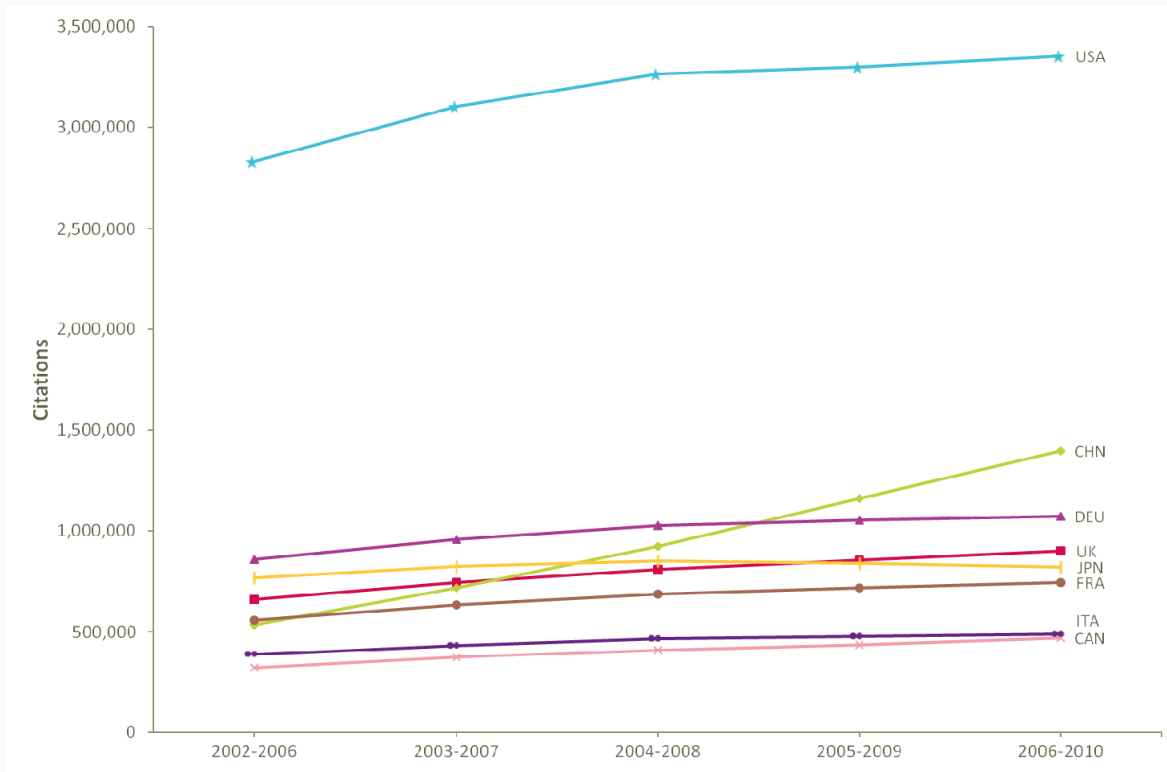
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	98,366	154,538	56,172	12.00%	-	-
G8	617,539	900,706	283,167	9.90%	2	2
EU-27	365,875	588,096	222,221	12.60%	1	1
OECD	865,280	1.373m	507,295	12.20%	2	2
World*	897,615	1.439m	541,582	12.50%	2	2

Citation output – Mathematics (BIS5)



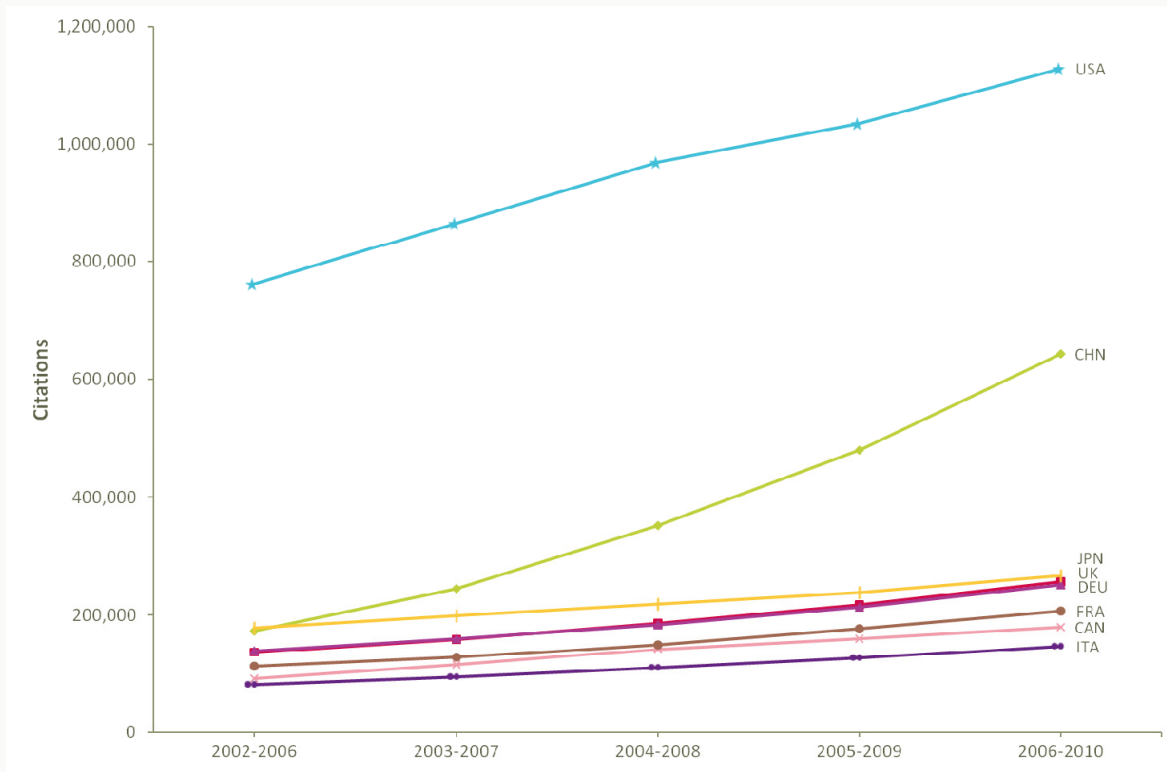
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	53,217	82,173	28,956	11.50%	-	-
G8	433,164	586,405	153,241	7.87%	3	2
EU-27	267,817	392,827	125,010	10.10%	2	1
OECD	577,564	885,230	307,666	11.30%	3	3
World*	607,596	954,447	346,851	12.00%	3	3

Citation output – Physical Sciences (BIS6)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	660,963	901,208	240,245	8.10%	-	-
G8	5.490m	6.557m	1.077m	4.58%	4	3
EU-27	3.041m	3.936m	894,720	6.70%	2	2
OECD	7.249m	9.604m	2.356m	7.30%	4	4
World*	7.582m	10.136m	2.555m	7.50%	4	4

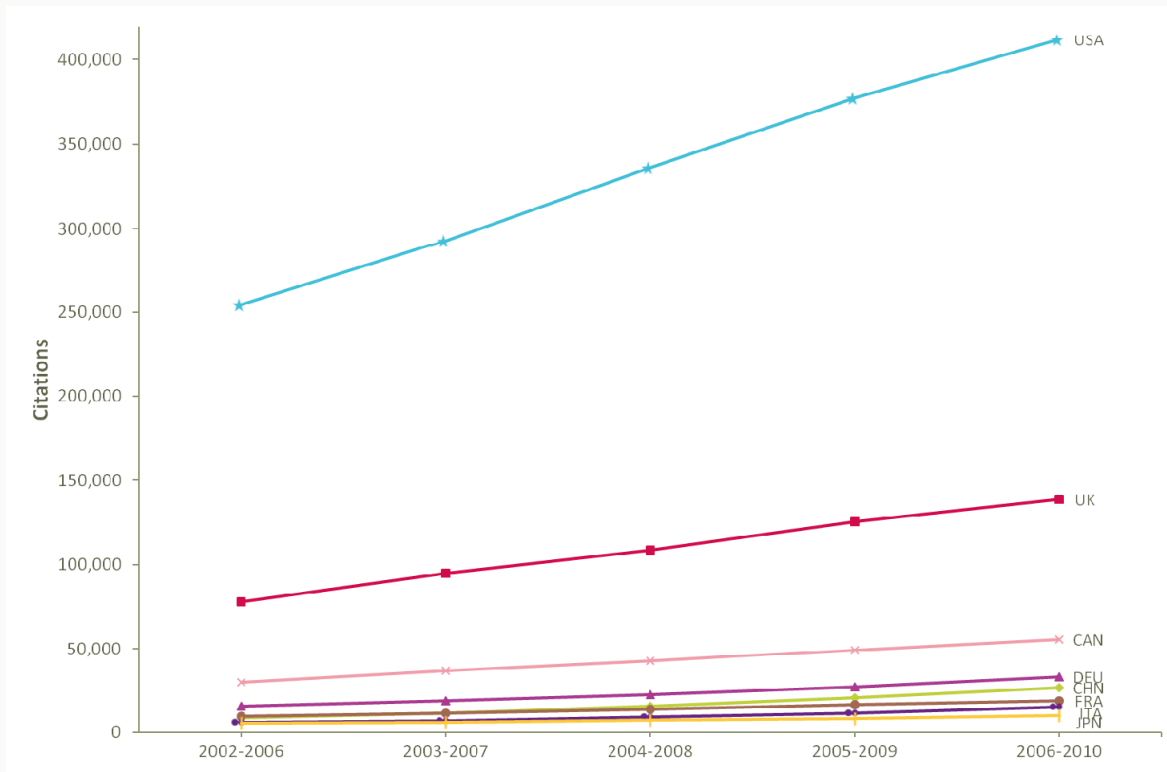
Citation output – Engineering (BIS7)



Source: Scopus

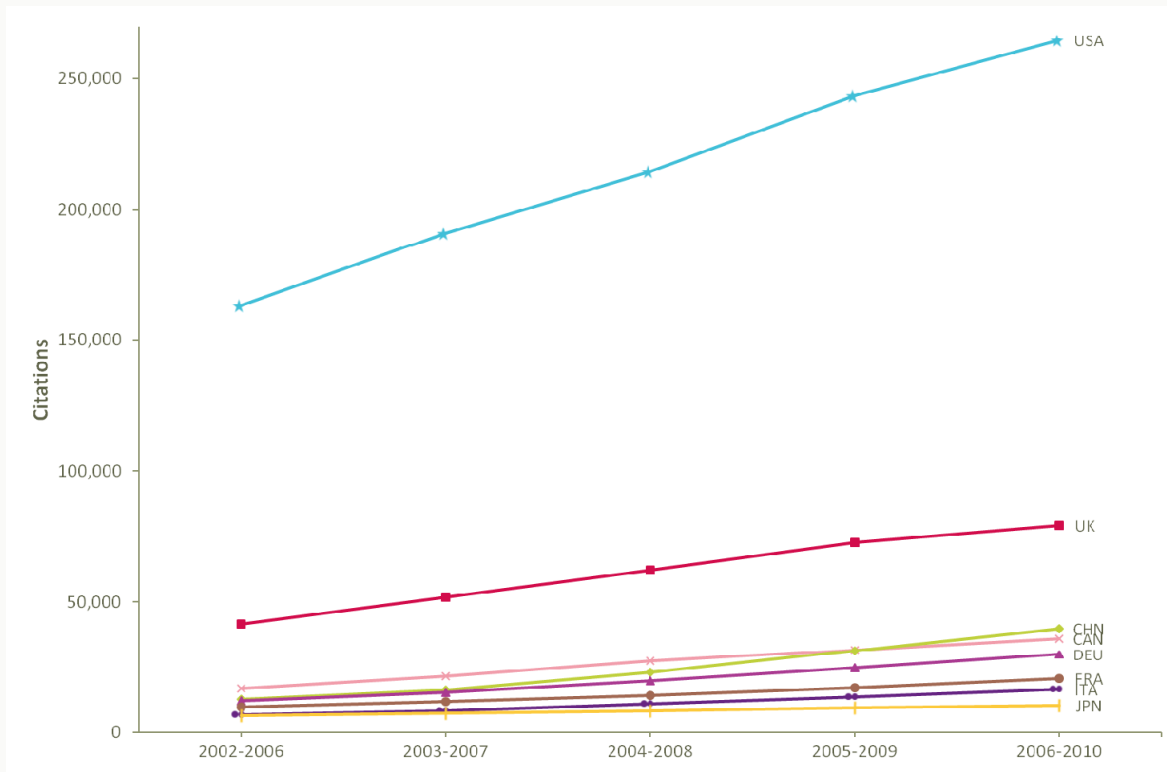
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	136,155	256,366	120,211	17.10%	-	-
G8	1.389m	2.215m	826,828	12.39%	4	3
EU-27	689,492	1.265m	575,744	16.40%	2	1
OECD	1.950m	3.618m	1.668m	16.70%	5	4
World*	2.105m	3.936m	1.832m	16.90%	5	4

Citation output – Social Sciences (BIS8)



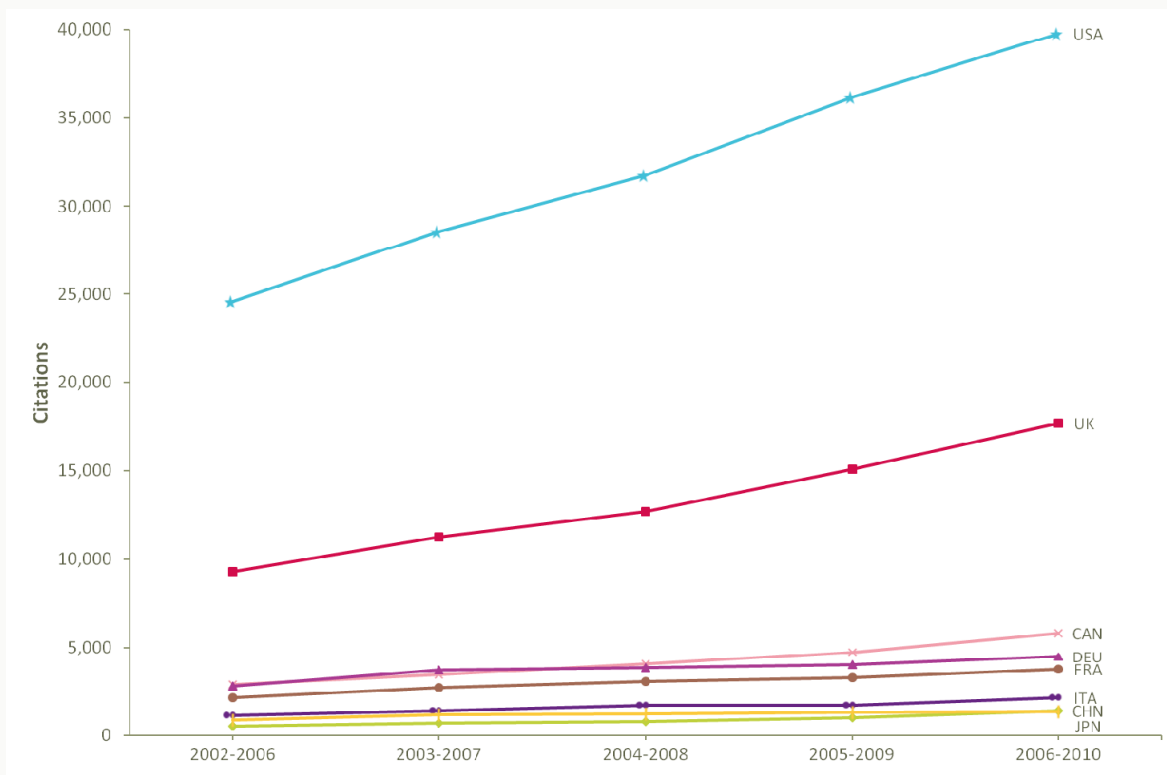
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	78,011	138,948	60,937	15.50%	-	-
G8	376,655	638,075	261,420	14.09%	2	2
EU-27	147,945	292,323	144,378	18.60%	1	1
OECD	457,612	819,540	361,928	15.70%	2	2
World*	516,815	895,863	379,048	14.70%	2	2

Citation output – Business (BIS9)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	41,627	79,361	37,734	17.50%	-	-
G8	237,115	415,429	178,314	15.05%	2	2
EU-27	103,619	222,681	119,062	21.10%	1	1
OECD	298,413	563,523	265,110	17.20%	2	2
World*	325,786	616,270	290,484	17.30%	2	2

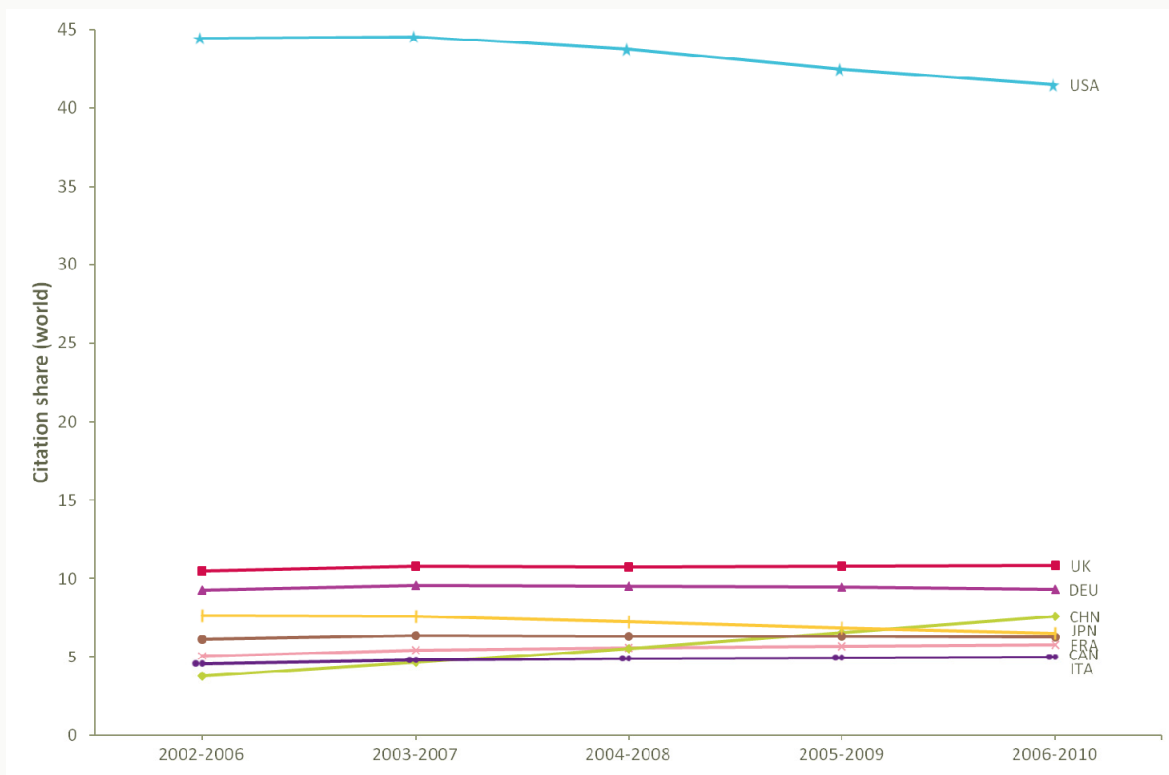
Citation output – Humanities (BIS10)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	9,307	17,685	8,378	17.40%	-	-
G8	40,423	69,381	28,958	14.46%	2	2
EU-27	18,840	36,164	17,324	17.70%	1	1
OECD	48,487	85,817	37,330	15.30%	2	2
World*	57,174	98,555	41,381	14.60%	2	2

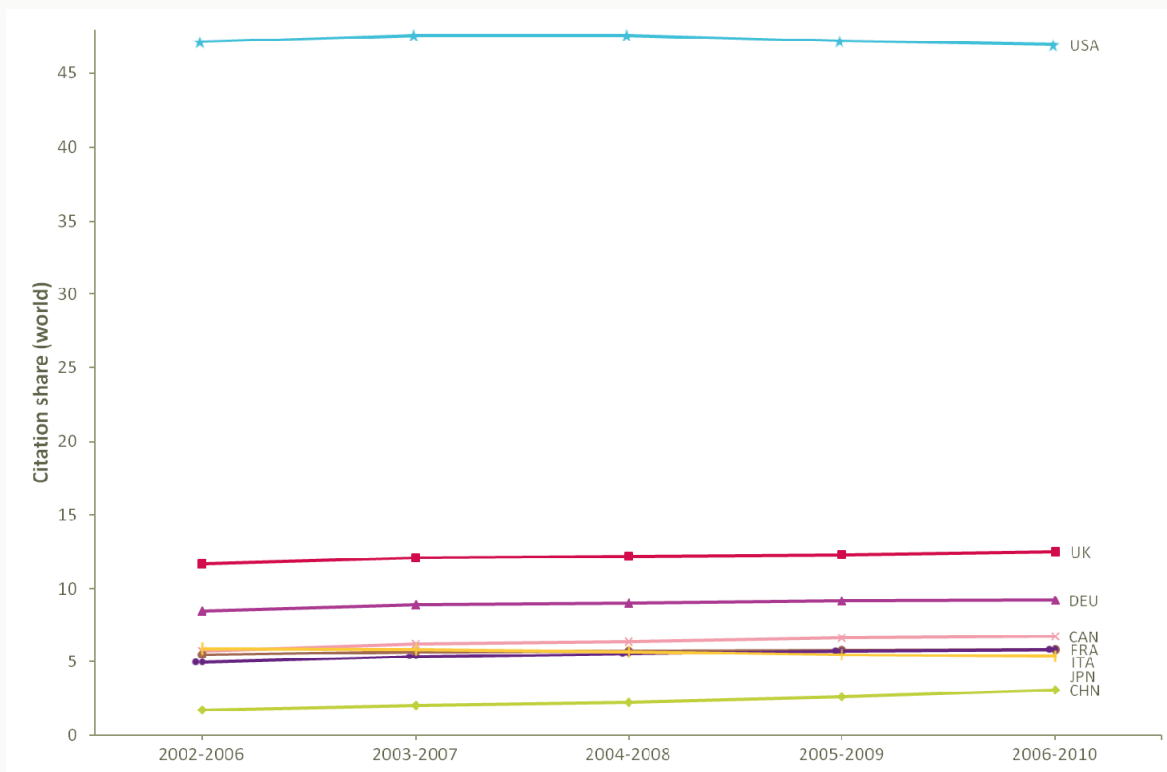
Source: Scopus

Citation share (world)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	10.49%	10.87%	0.38%	0.90%	-	-
G8	76.11%	71.17%	-4.94%	-1.66%	2	2
EU-27	38.61%	39.27%	0.66%	0.42%	1	1
OECD	95.67%	95.41%	-0.25%	-0.07%	2	2
World	100%	100%	-	-	2	2

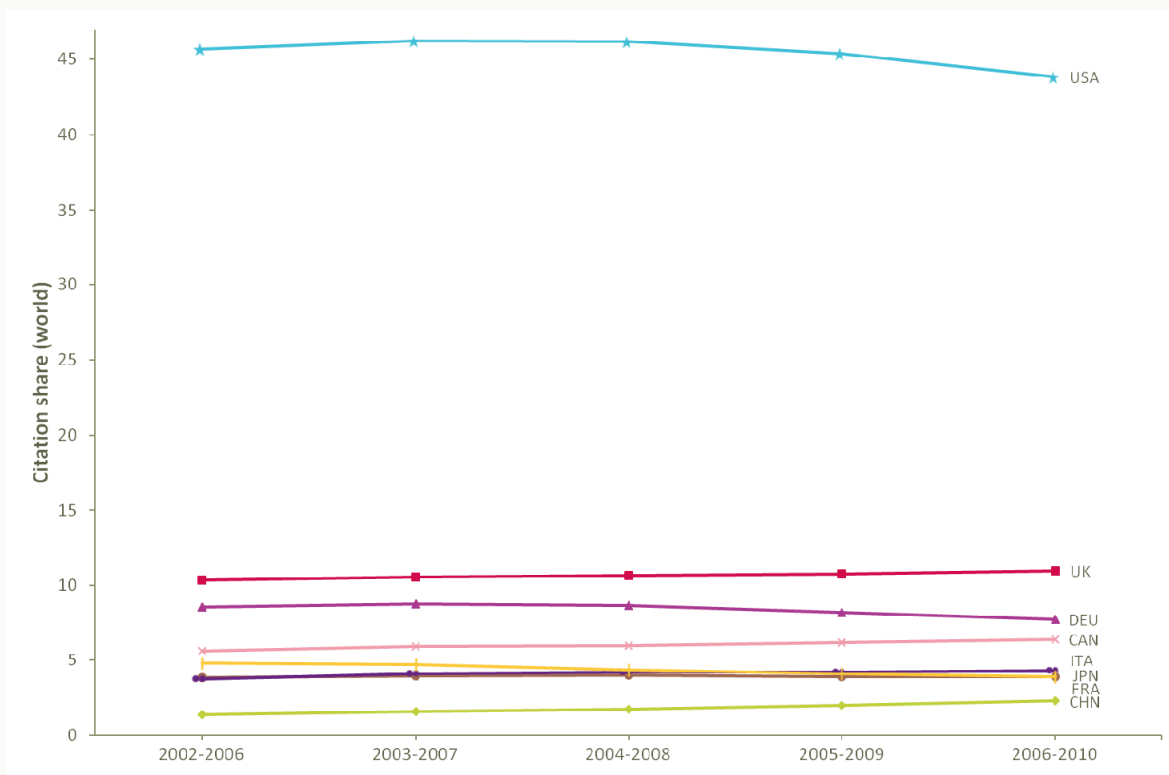
Citation share (world) – Clinical Sciences (BIS1)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UKrank 2010
UK	11.64%	12.52%	0.85%	1.80%	-	-
G8	77.90%	76.49%	-1.41%	-0.46%	2	2
EU-27	29.04%	40.84%	1.80%	1.10%	1	1
OECD	95.59%	96.13%	0.54%	0.10%	2	2
World*	100%	100%	-	-	2	2

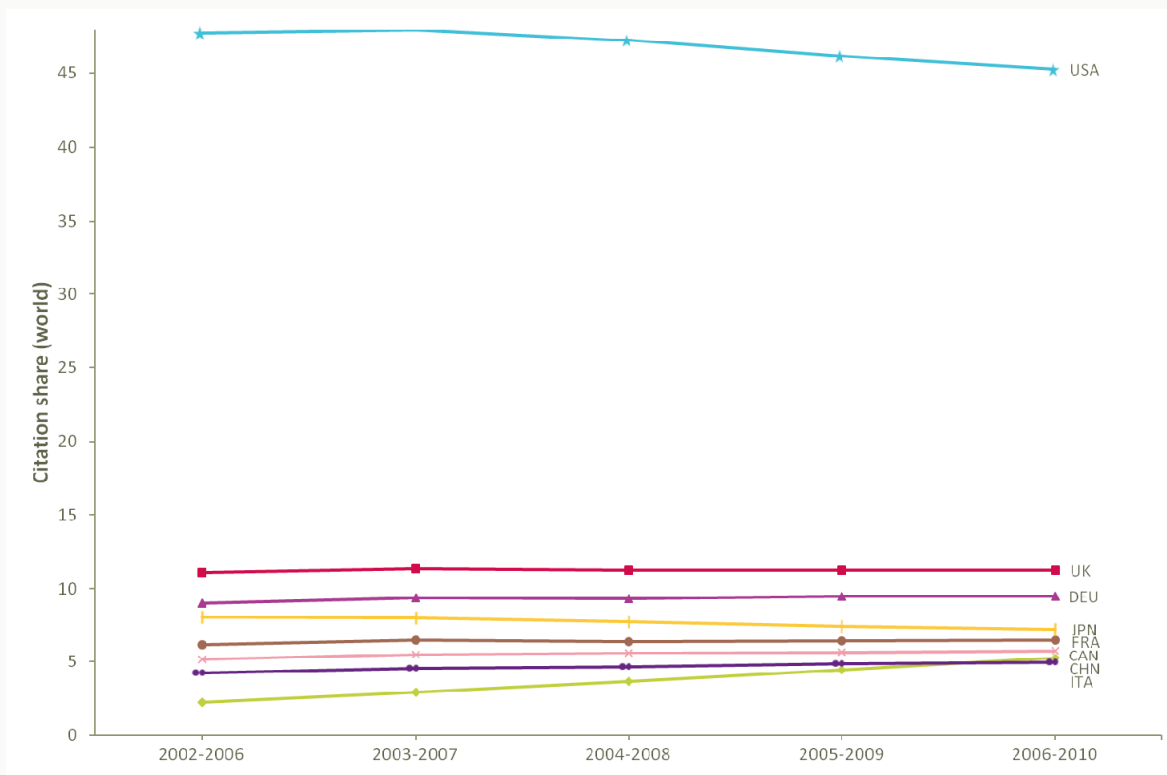
Source: Scopus

Citation share (world) – Health & Medical Sciences (BIS2)



	2006	2010	Change 06-10	CAGR 06-10	UKrank 2006	UKrank 2010
UK	10.37%	10.98%	0.61%	1.40%	-	-
G8	74.34%	71.11%	-3.23%	-1.10%	2	2
EU-27	36.95%	37.35%	0.40%	0.30%	1	1
OECD	94.79%	94.79%	0.00%	0.00%	2	2
World*	100%	100%	-	-	2	2

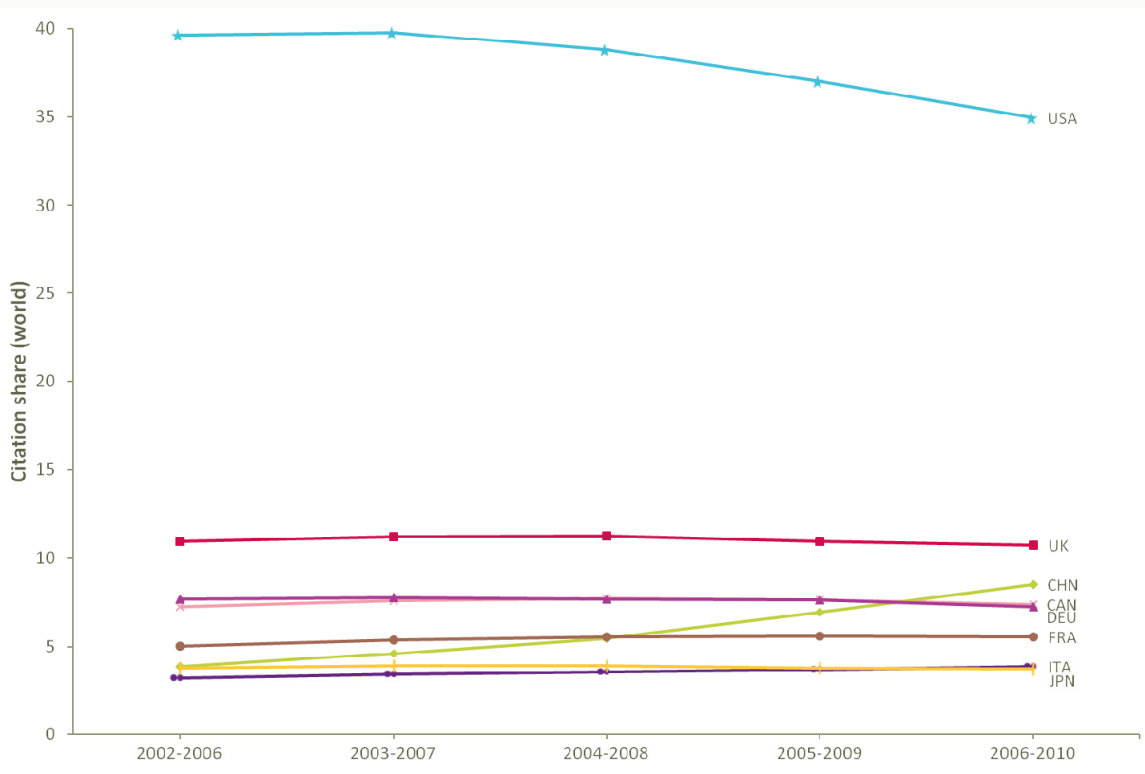
Citation share (world) – Biological Sciences (BIS3)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	11.09%	11.28%	0.18%	0.40%	-	-
G8	79.19%	74.96%	-4.23%	-1.36%	2	2
EU-27	39.12%	40.30%	1.18%	0.70%	1	1
OECD	97.08%	96.73%	-0.35%	-0.10%	2	2
World*	100%	100%	-	-	2	2

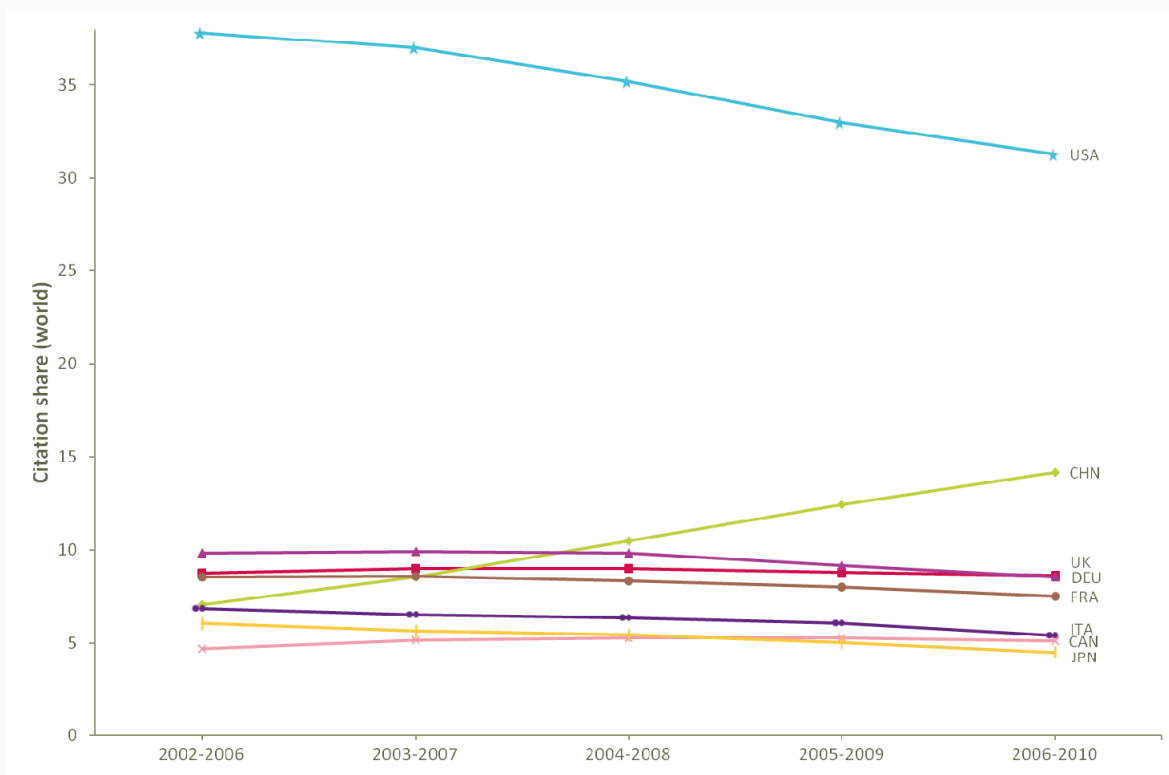
Source: Scopus

Citation share (world) – Environmental Sciences (BIS4)



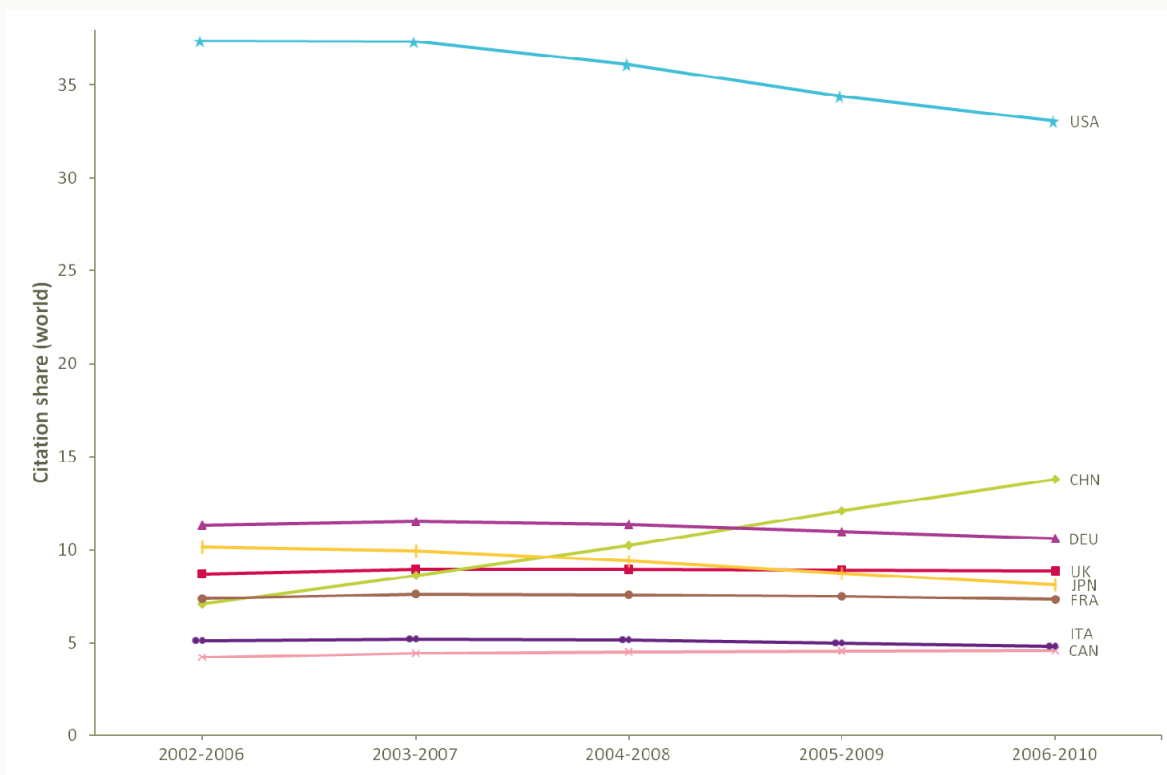
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	10.96%	10.74%	-0.22%	-0.50%	-	-
G8	68.80%	62.58%	-6.21%	-2.34%	2	2
EU-27	40.76%	40.86%	0.10%	0.10%	1	1
OECD	96.40%	95.37%	-1.03%	-0.30%	2	2
World*	100%	100%	-	-	2	2

Citation share (world) – Mathematics (BIS5)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	8.76%	8.61%	-0.15%	-0.40%	-	-
G8	71.29%	61.44%	-9.85%	-3.65%	3	2
EU-27	44.08%	41.16%	-2.92%	-1.70%	2	1
OECD	95.06%	92.75%	-2.31%	-0.60%	3	3
World*	100%	100%	-	-	3	3

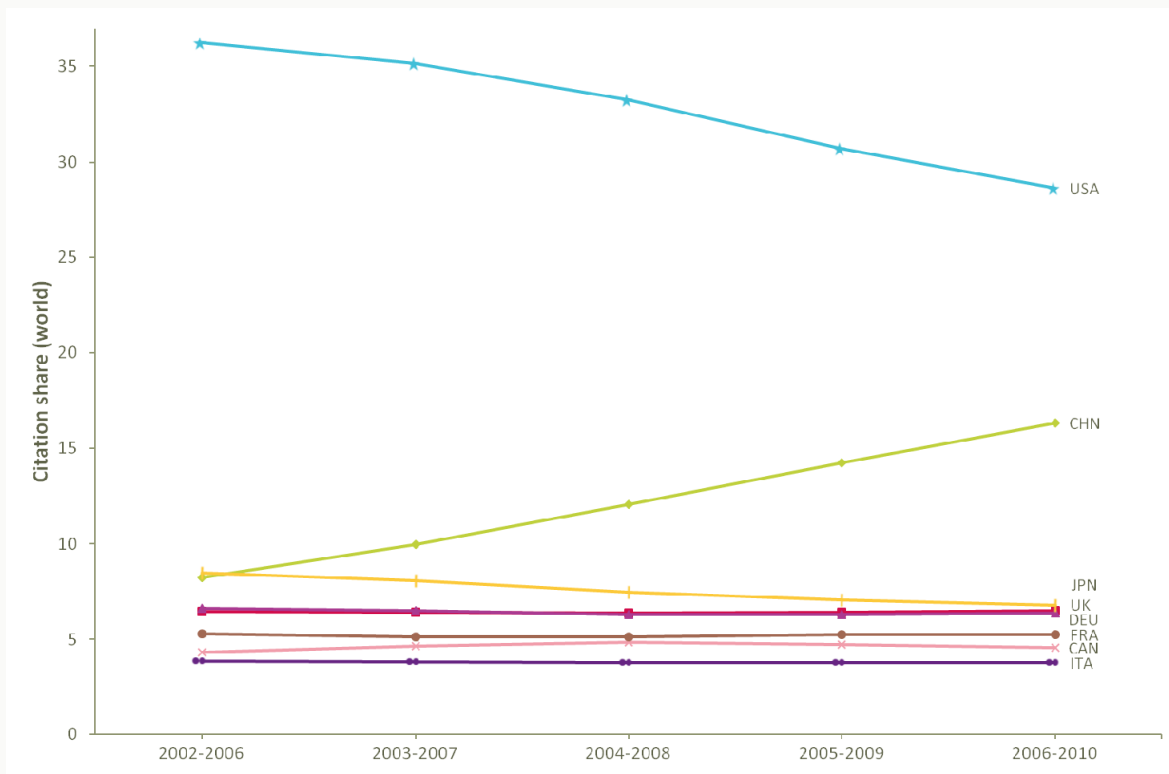
Citation share (world) – Physical Sciences (BIS6)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	8.72%	8.89%	0.17%	0.50%	-	-
G8	72.41%	64.79%	-7.62%	-2.74%	4	3
EU-27	40.12%	38.83%	-1.28%	-0.80%	2	2
OECD	95.61%	94.75%	-0.86%	-0.20%	4	4
World*	100%	100%	-	-	4	4

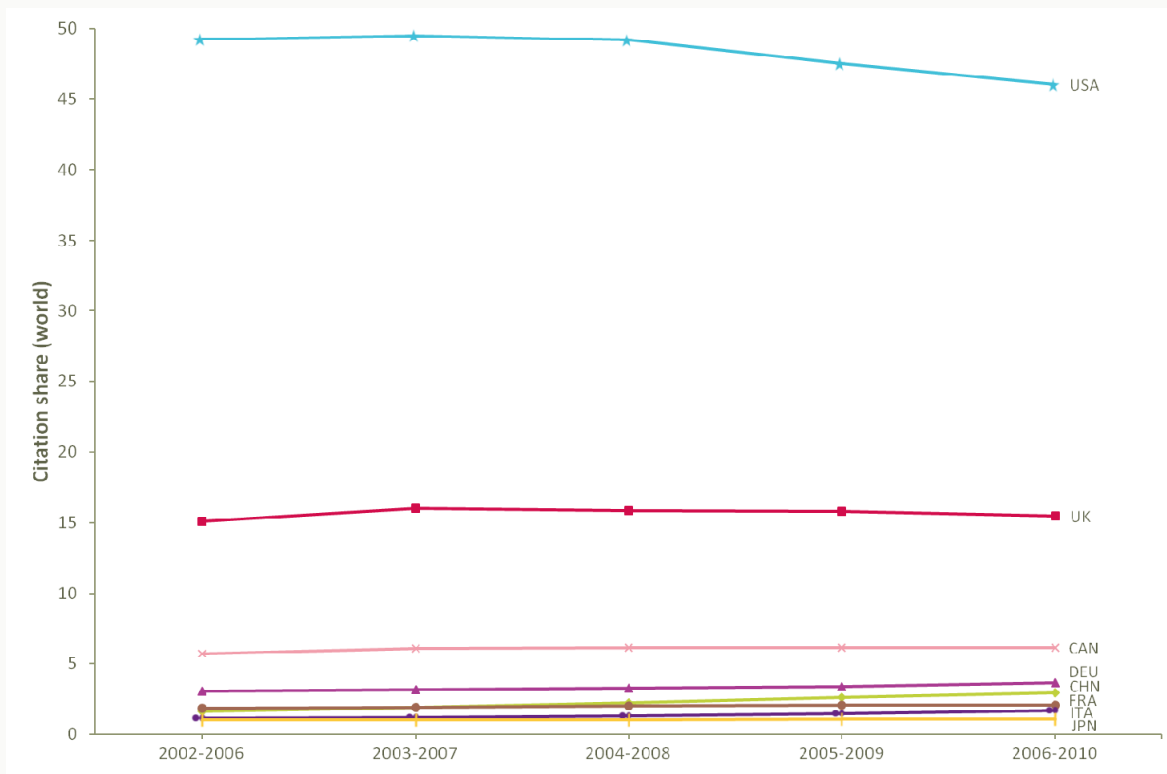
Source: Scopus

Citation share (world) – Engineering (BIS7)



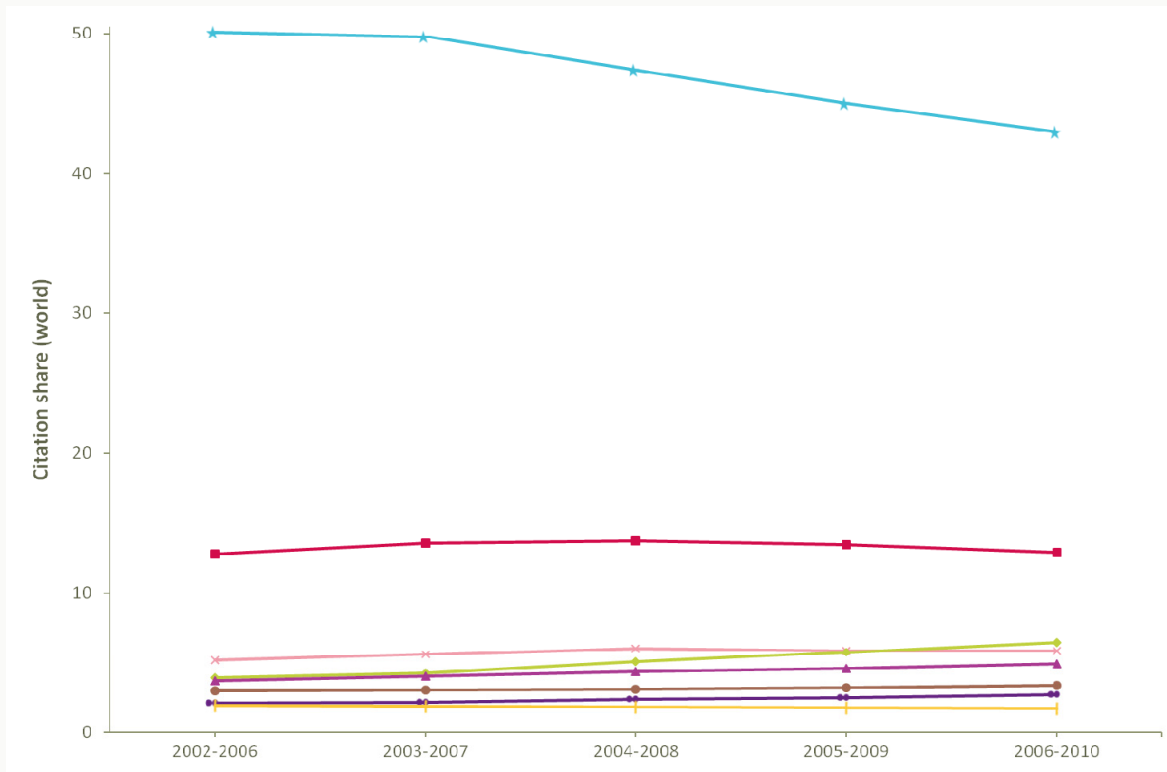
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	6.47%	6.51%	0.04%	0.20%	-	-
G8	65.98%	56.28%	-9.70%	-3.90%	4	3
EU-27	32.76%	32.14%	-0.62%	-0.50%	2	1
OECD	92.64%	91.90%	-0.74%	-0.20%	5	4
World*	100%	100%	-	-	5	4

Citation share (world) – Social Sciences (BIS8)



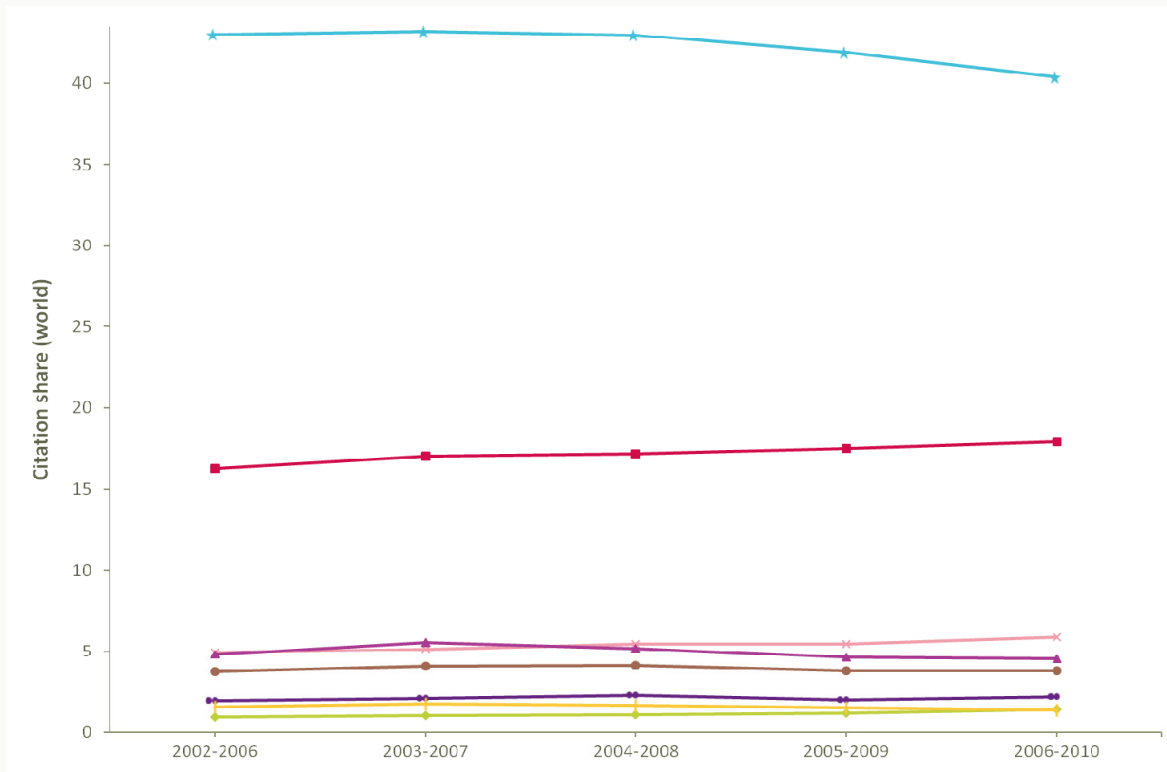
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	15.10%	15.51%	0.41%	0.70%	-	-
G8	72.88%	71.22%	-1.66%	-0.57%	2	2
EU-27	28.63%	32.63%	4.00%	3.30%	1	1
OECD	88.55%	91.48%	2.94%	0.80%	2	2
World*	100%	100%	-	-	2	2

Citation share (world) – Business (BIS9)



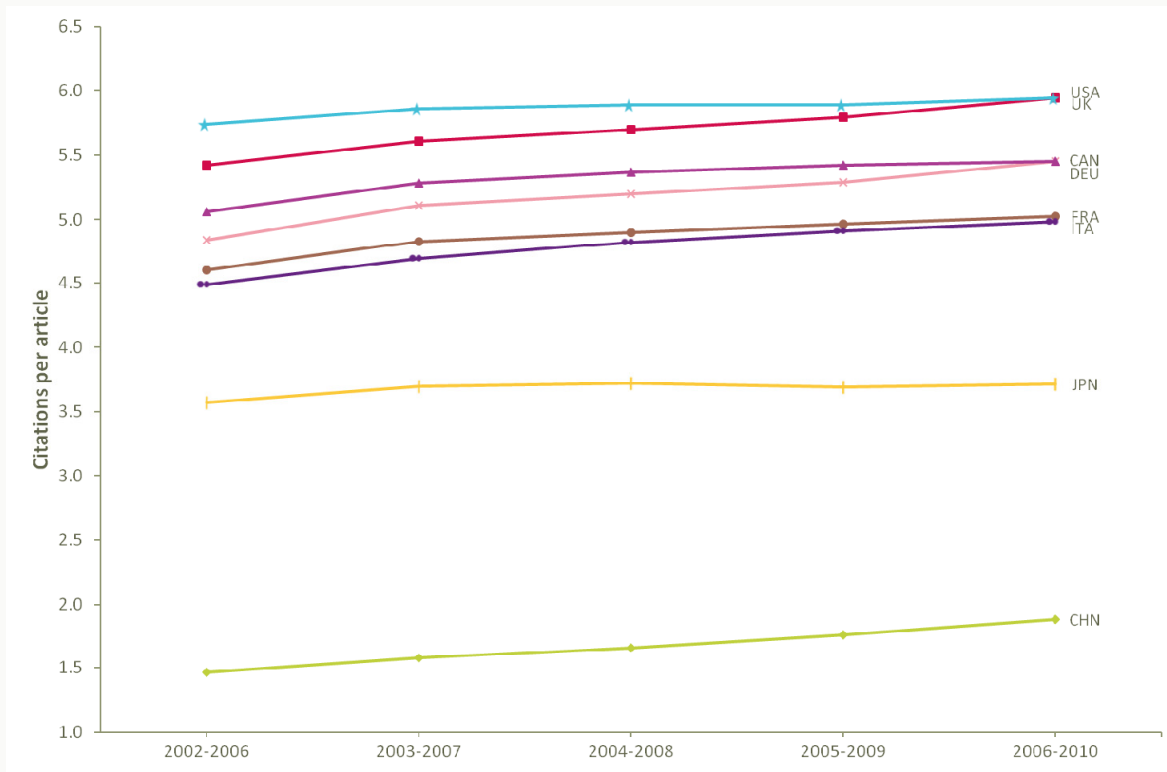
	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	12.78%	12.88%	0.10%	0.20%	-	-
G8	72.78%	67.41%	-5.37%	-1.90%	2	2
EU-27	31.81%	36.13%	4.33%	3.20%	1	1
OECD	91.60%	91.44%	-0.16%	0.00%	2	2
World*	100%	100%	-	-	2	2

Citation share (world) – Humanities (BIS10)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	16.28%	17.94%	1.67%	2.50%	-	-
G8	70.70%	70.40%	-0.30%	-0.11%	2	2
EU-27	32.95%	36.69%	3.74%	2.70%	1	1
OECD	84.81%	87.08%	2.27%	0.70%	2	2
World*	100%	100%	-	-	2	2

Citations per article

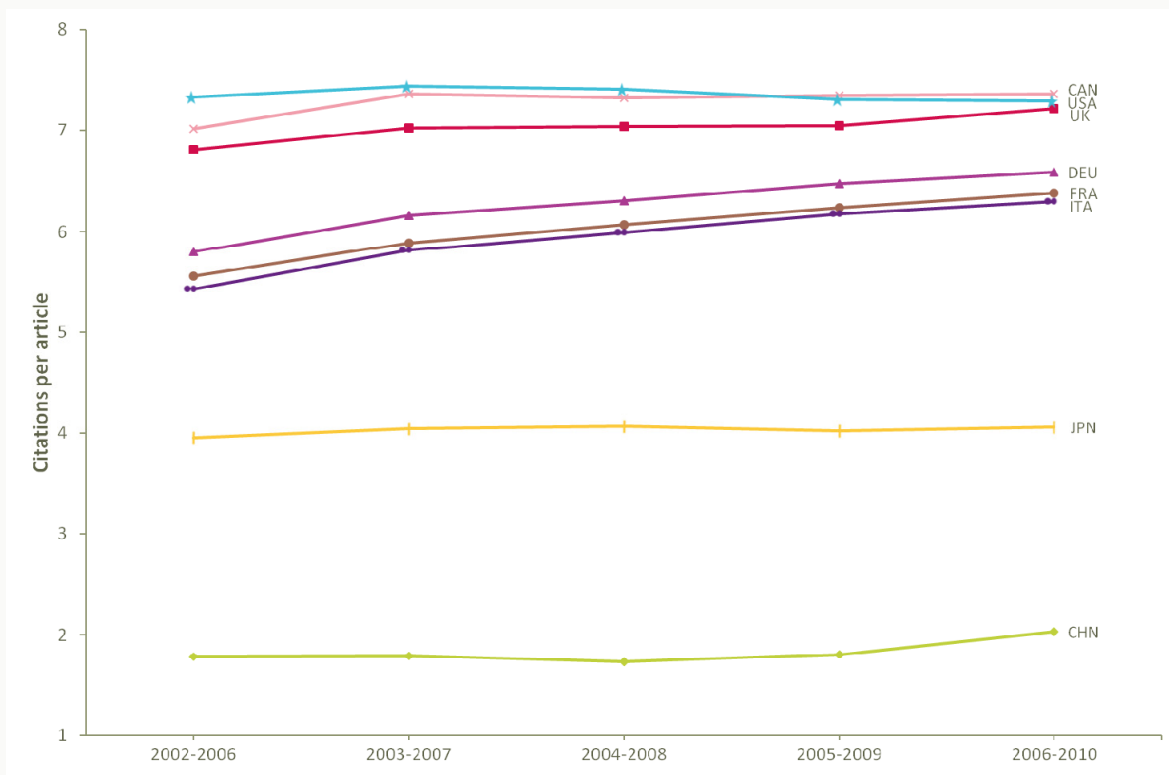


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	5.42	5.94	0.52	2.33%		
G8	4.71	4.90	0.19	1.01%	2	2
EU-27	4.35	4.60	0.25	1.41%	4	5
OECD	3.96	3.94	-0.02	-0.11%	7	8
World	3.48	3.57	0.09	0.66%	7	8

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Clinical Sciences (BIS1)

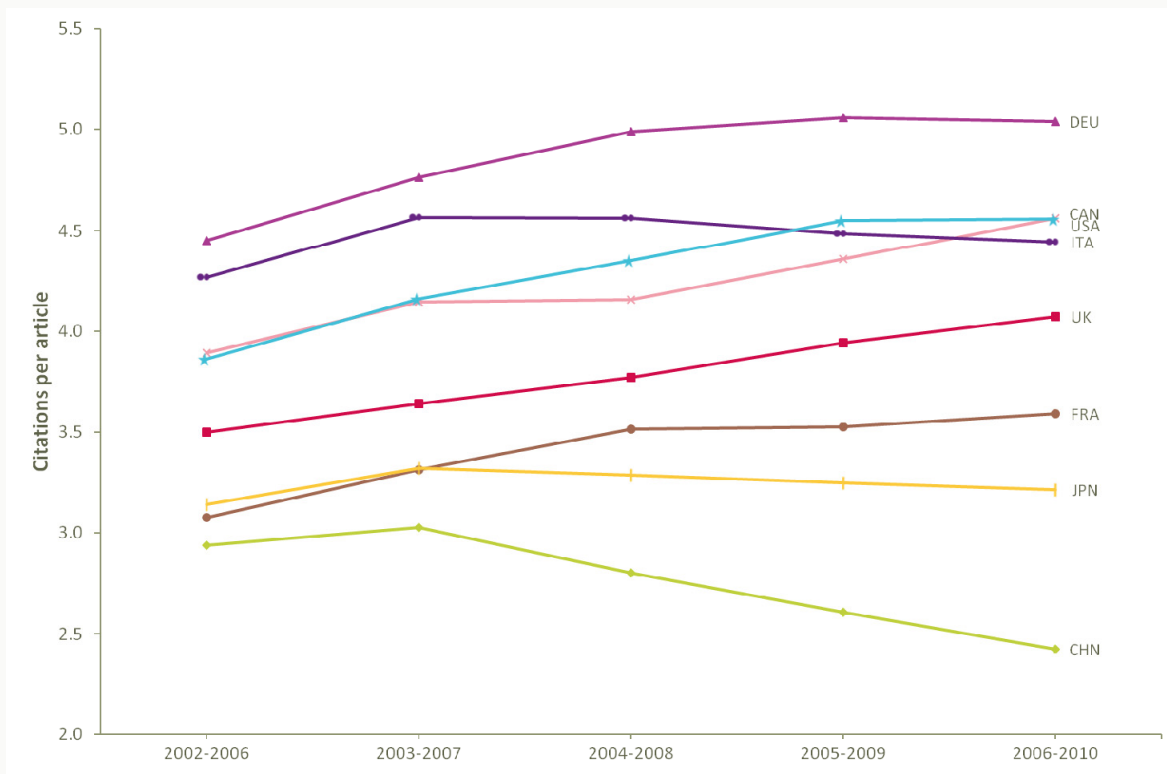


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	6.81	7.21	0.40	1.43%		
G8	6.04	6.12	0.08	0.33%	3	3
EU-27	5.21	5.56	0.35	1.65%	7	6
OECD	5.18	5.11	-0.07	-0.34%	10	11
World	4.76	4.63	-0.13	-0.66%	11	11

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Health & Medical Sciences (BIS2)

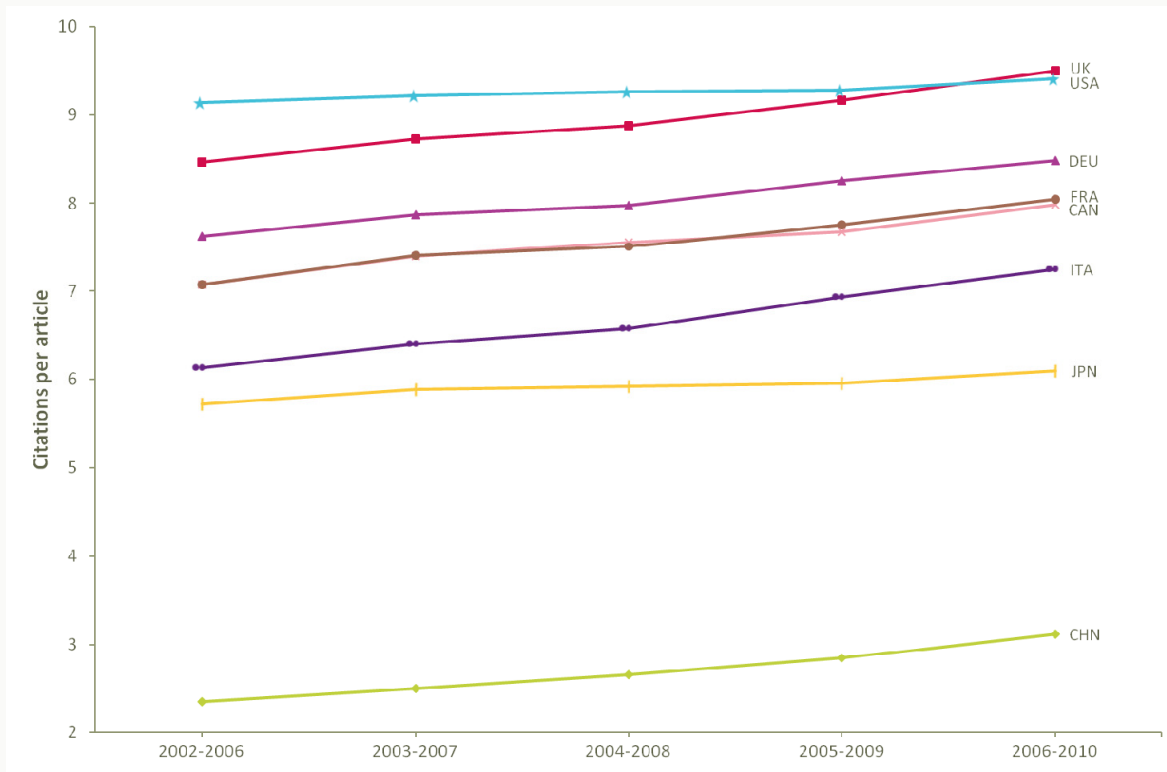


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	3.50	4.07	0.57	3.84%		
G8	3.62	4.11	0.50	3.29%	5	5
EU-27	3.54	3.90	0.36	2.44%	12	11
OECD	3.33	3.60	0.27	1.98%	15	15
World	3.04	3.26	0.22	1.78%	21	16

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Biological Sciences (BIS3)

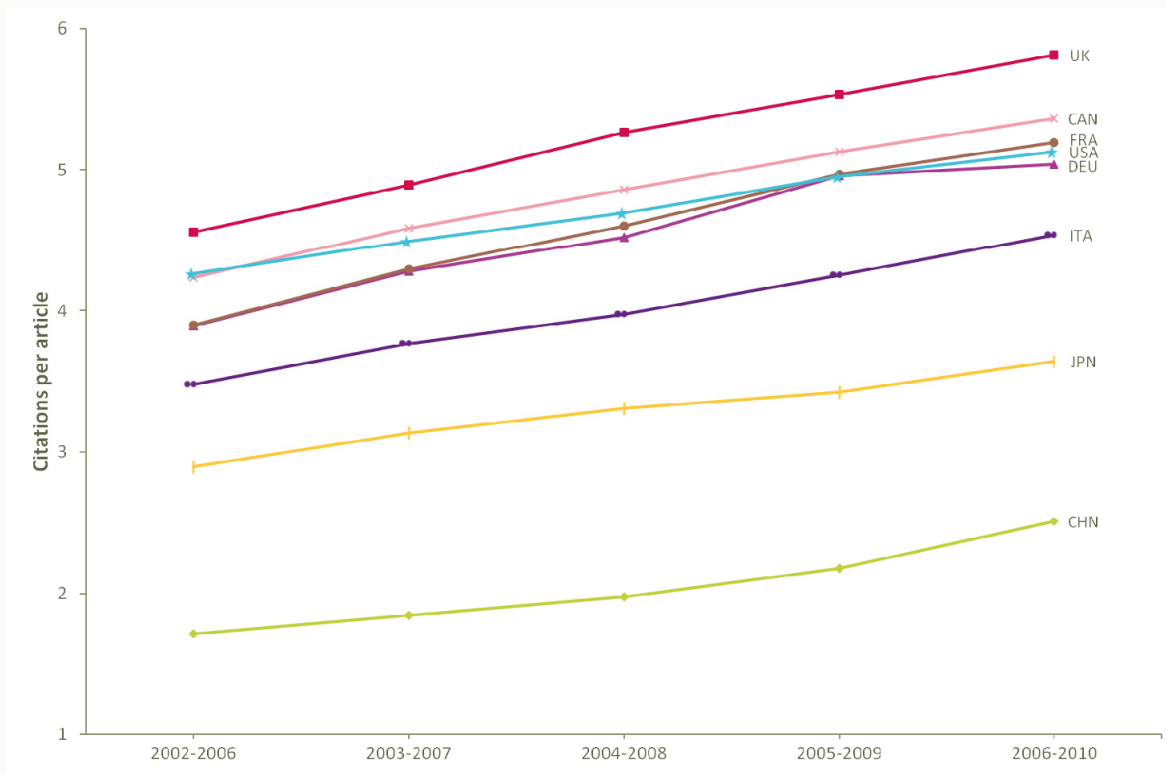


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	8.47	9.49	1.02	2.89%		
G8	7.54	7.90	0.36	1.17%	2	1
EU-27	6.52	7.17	0.65	2.38%	1	2
OECD	6.37	6.41	0.05	0.18%	3	4
World	6.06	6.07	0.00	0.02%	3	4

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Environmental Sciences (BIS4)

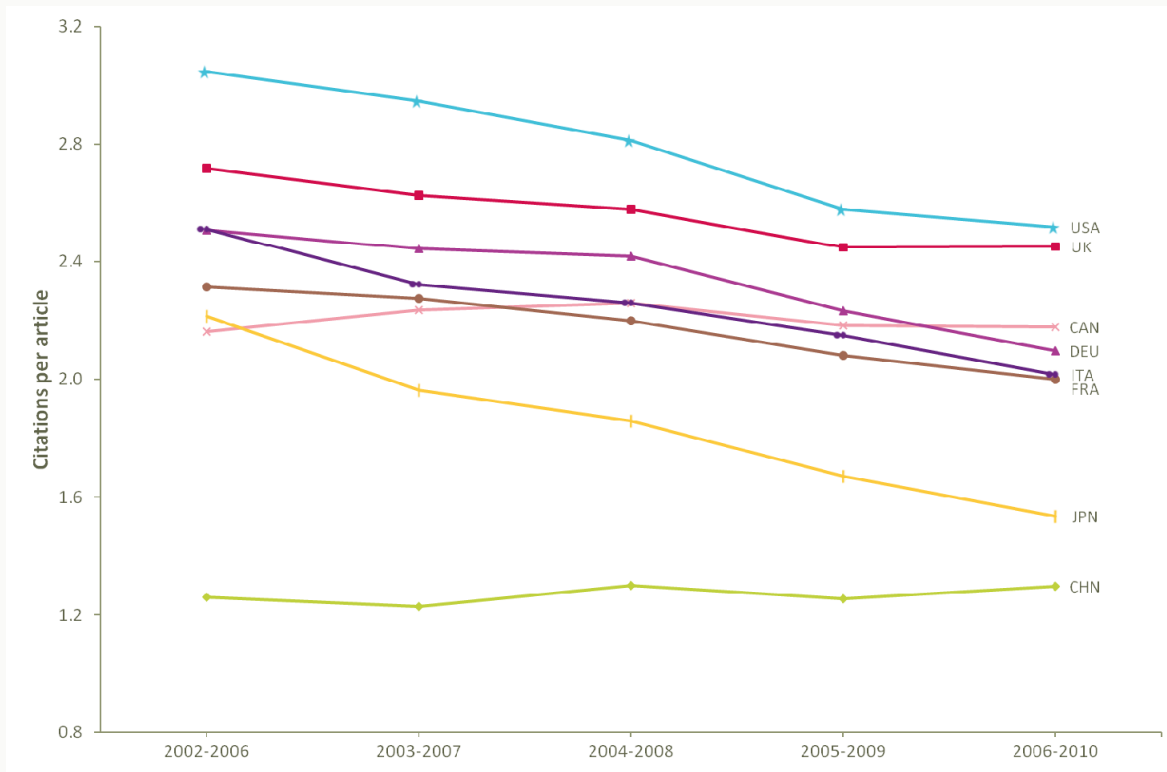


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	4.56	5.81	1.25	6.22%		
G8	3.85	4.69	0.84	5.04%	1	1
EU-27	3.80	4.73	0.93	5.63%	6	6
OECD	3.43	4.05	0.62	4.26%	8	8
World	3.12	3.74	0.62	4.67%	8	8

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Mathematics (BIS5)

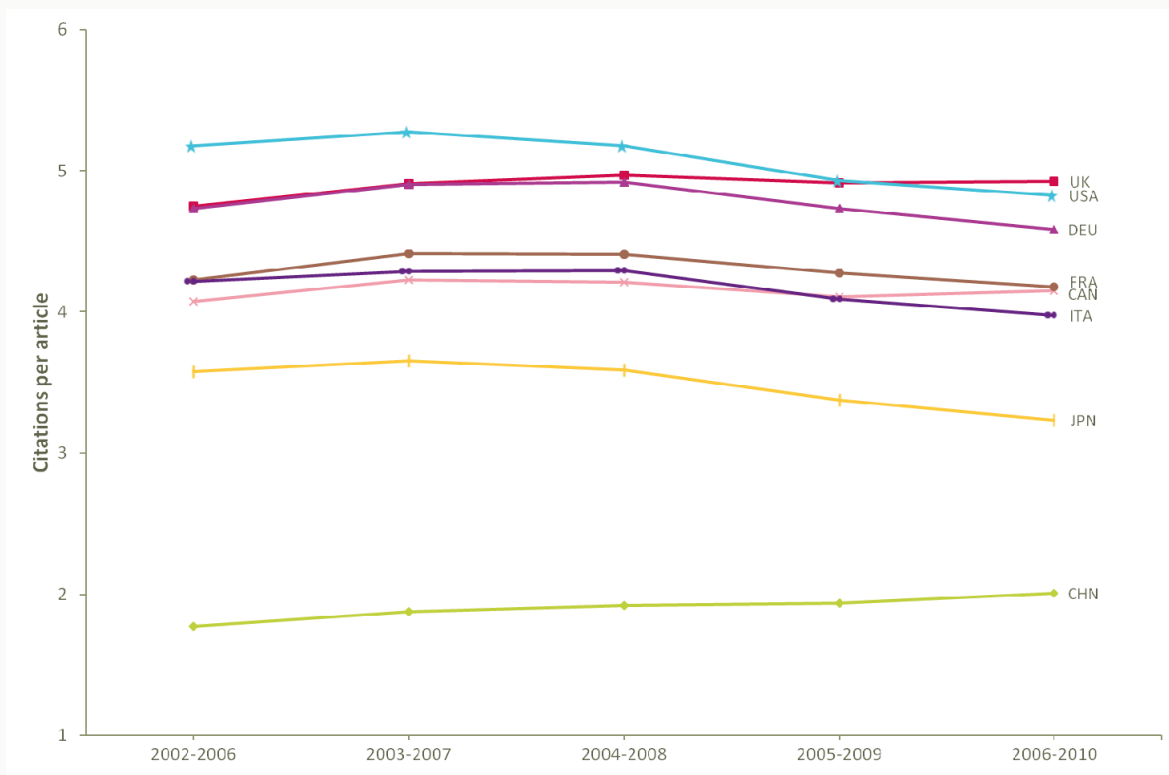


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	2.72	2.45	-0.27	-2.55%		
G8	2.43	2.06	-0.37	-4.09%	2	2
EU-27	2.17	1.94	-0.23	-2.74%	2	2
OECD	2.05	1.76	-0.29	-3.71%	4	4
World	1.94	1.73	-0.22	-2.90%	6	6

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Physical Sciences (BIS6)

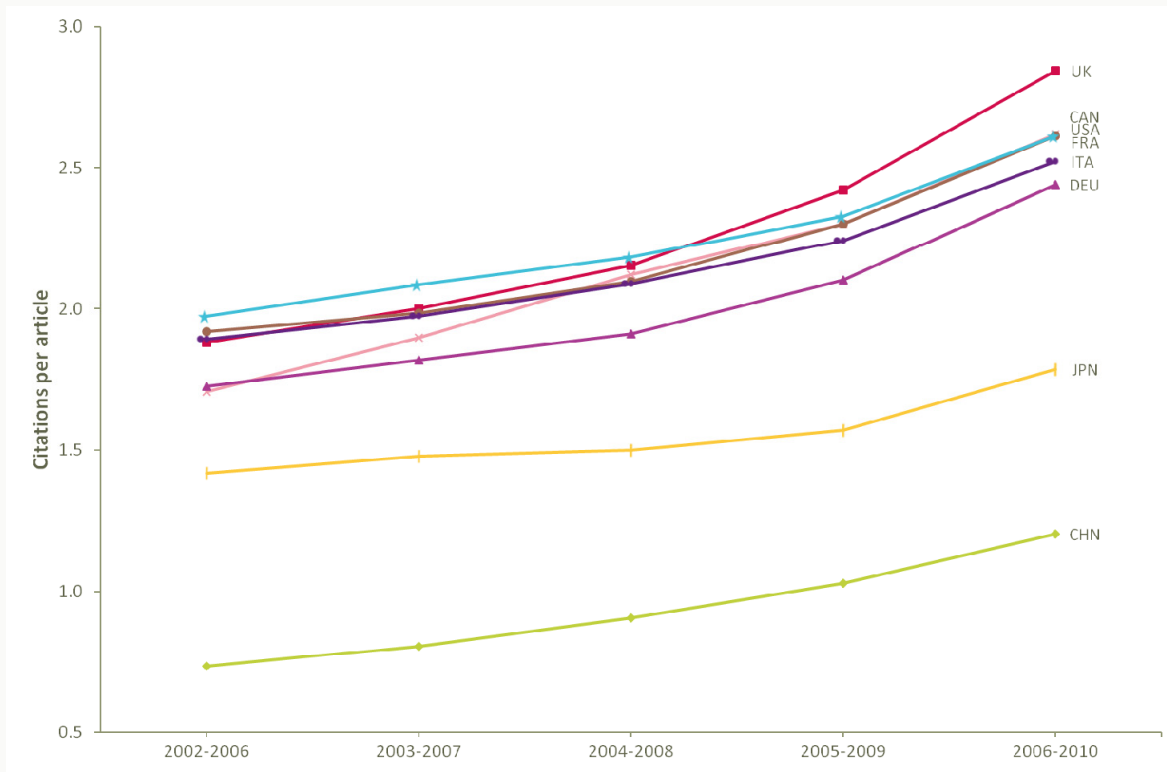


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	4.75	4.93	0.17	0.90%		
G8	4.15	3.94	-0.21	-1.27%	2	1
EU-27	3.99	3.84	-0.15	-0.96%	3	3
OECD	3.51	3.22	-0.29	-2.16%	6	4
World	3.23	3.03	-0.19	-1.52%	6	4

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Engineering (BIS7)

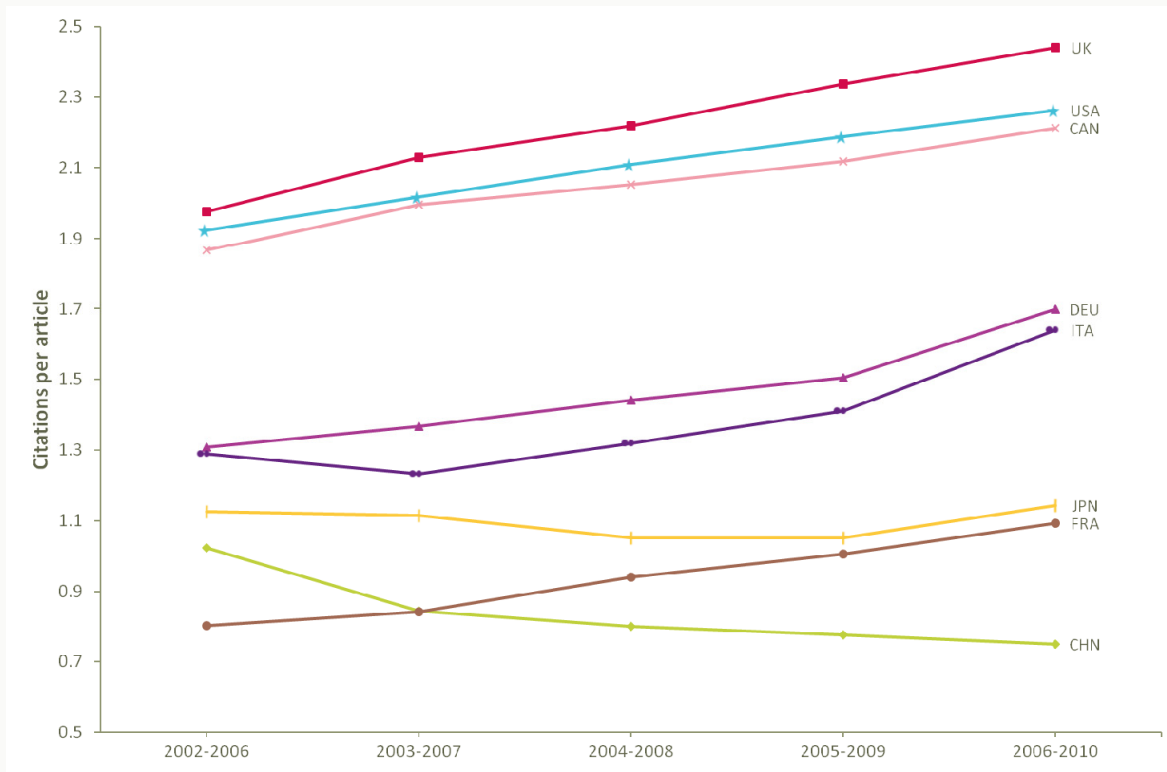


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	1.88	2.84	0.96	10.88%		
G8	1.73	2.34	0.61	7.83%	4	1
EU-27	1.80	2.48	0.68	8.29%	9	5
OECD	1.51	1.97	0.46	6.81%	14	9
World	1.27	1.80	0.53	9.03%	16	10

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Social Sciences (BIS8)

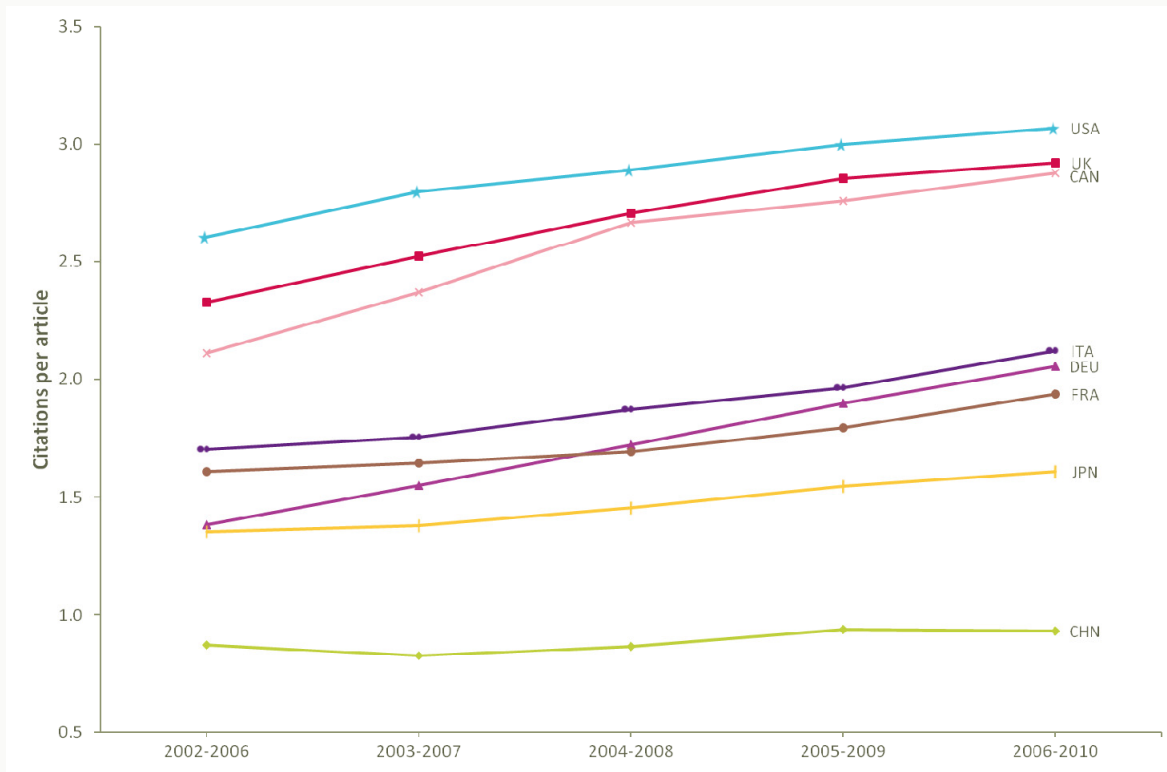


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	1.98	2.44	0.46	5.38%		
G8	1.76	2.07	0.32	4.26%	1	1
EU-27	1.54	1.87	0.33	4.90%	3	2
OECD	1.63	1.82	0.18	2.69%	3	4
World	1.38	1.58	0.20	3.36%	5	6

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Business (BIS9)

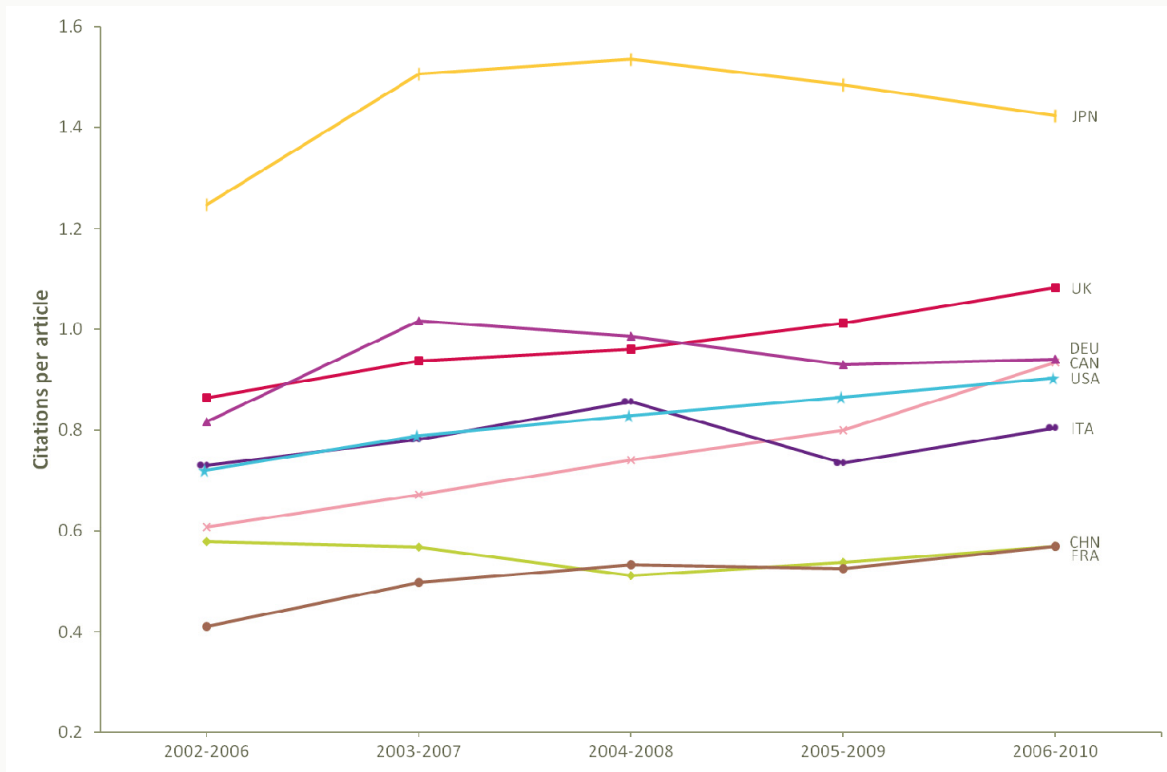


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	2.33	2.92	0.59	5.85%		
G8	2.24	2.70	0.45	4.72%	2	2
EU-27	1.84	2.36	0.52	6.47%	4	5
OECD	1.94	2.21	0.28	3.38%	5	6
World	1.47	1.85	0.38	5.96%	9	13

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Citations per article – Humanities (BIS10)

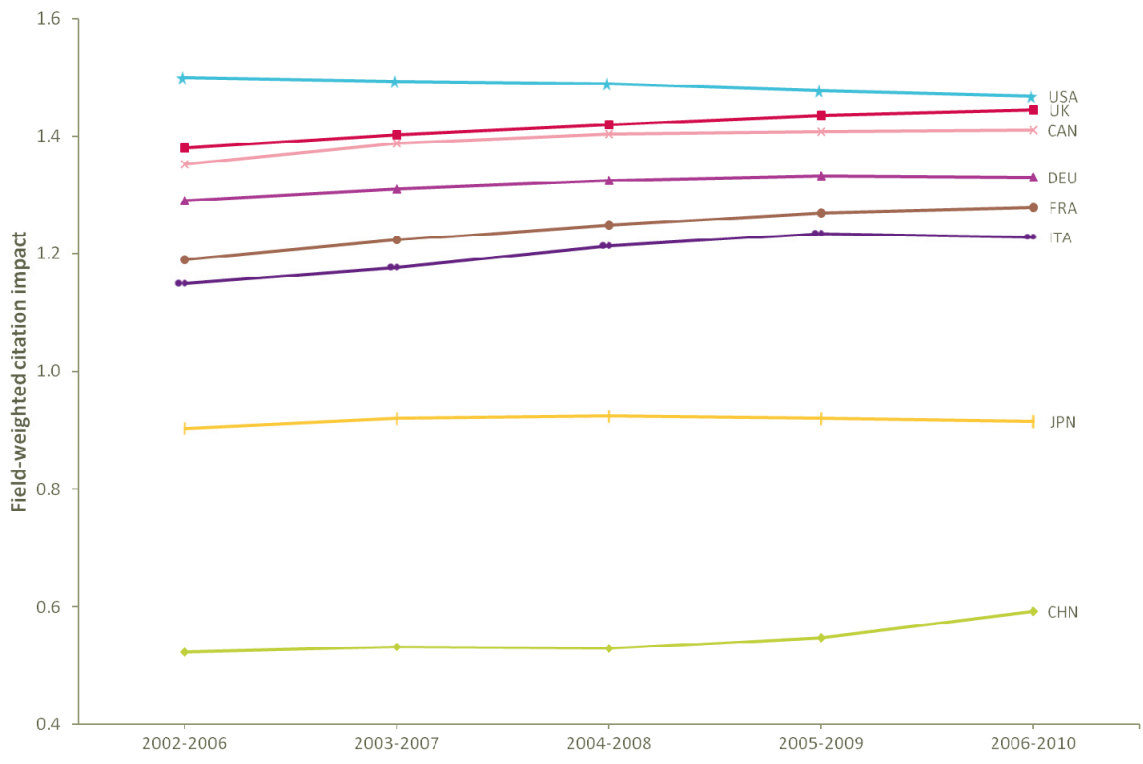


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	0.86	1.08	0.22	5.82%		
G8	0.68	0.87	0.19	6.20%	2	2
EU-27	0.63	0.81	0.17	6.26%	3	3
OECD	0.63	0.78	0.15	5.45%	6	6
World	0.38	0.55	0.17	9.85%	8	11

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Field-weighted citation impact

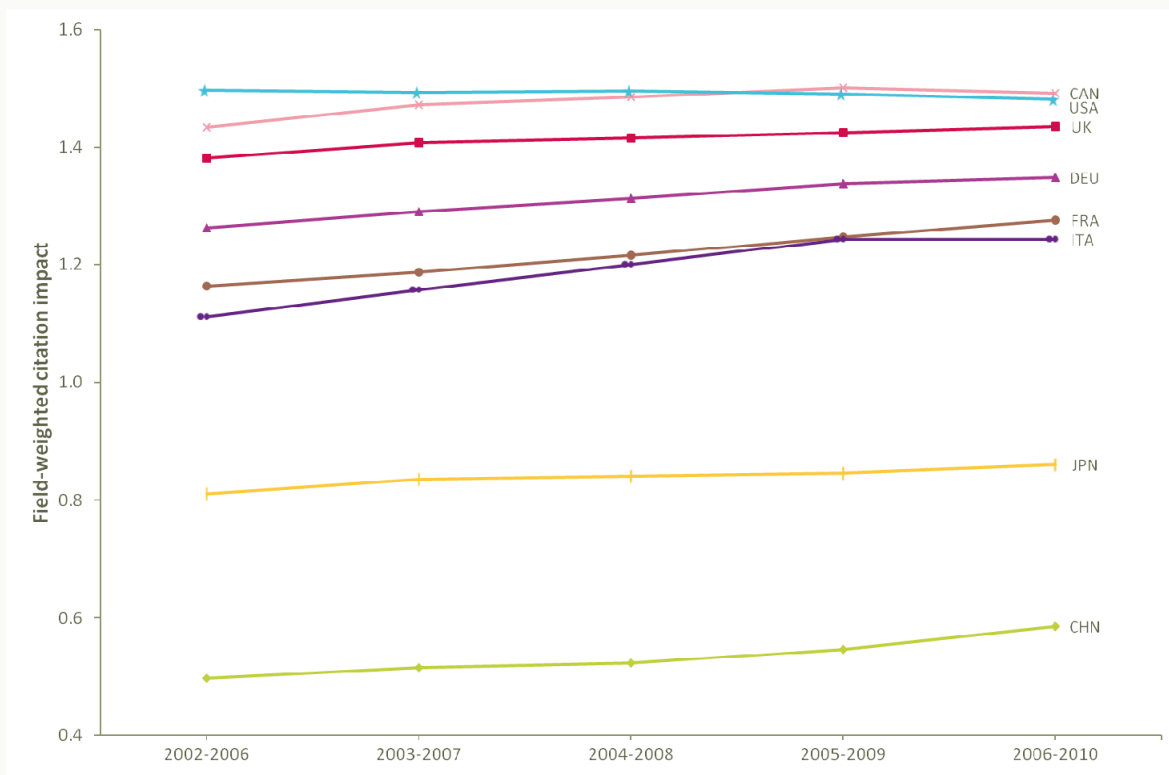


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.38	1.44	0.06	1.14%	-	-
G8	1.22	1.22	0.00	0.06%	2	2
EU-27	1.12	1.15	0.03	0.68%	4	5
OECD	1.06	1.03	-0.03	-0.74%	7	8
World	1.00	1.00	-	-	7	8

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

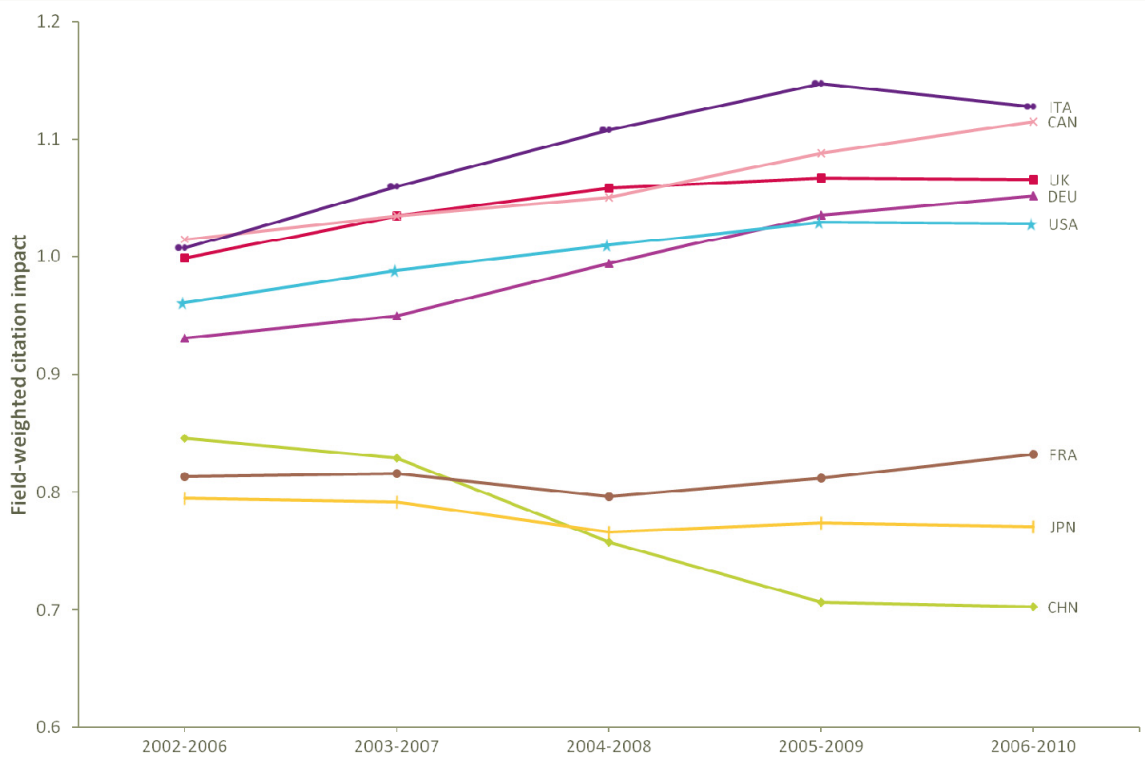
Field-weighted citation impact – Clinical Sciences (BIS1)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.38	1.44	0.05	0.96%	-	-
GB	1.24	1.25	0.01	0.26%	3	3
EU-27	1.10	1.15	0.04	0.92%	6	7
OECD	1.10	1.08	-0.01	-0.28%	11	12
World	1.00	1.00	-	-	11	14

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Field-weighted citation impact – Health & Medical Sciences (BIS2)

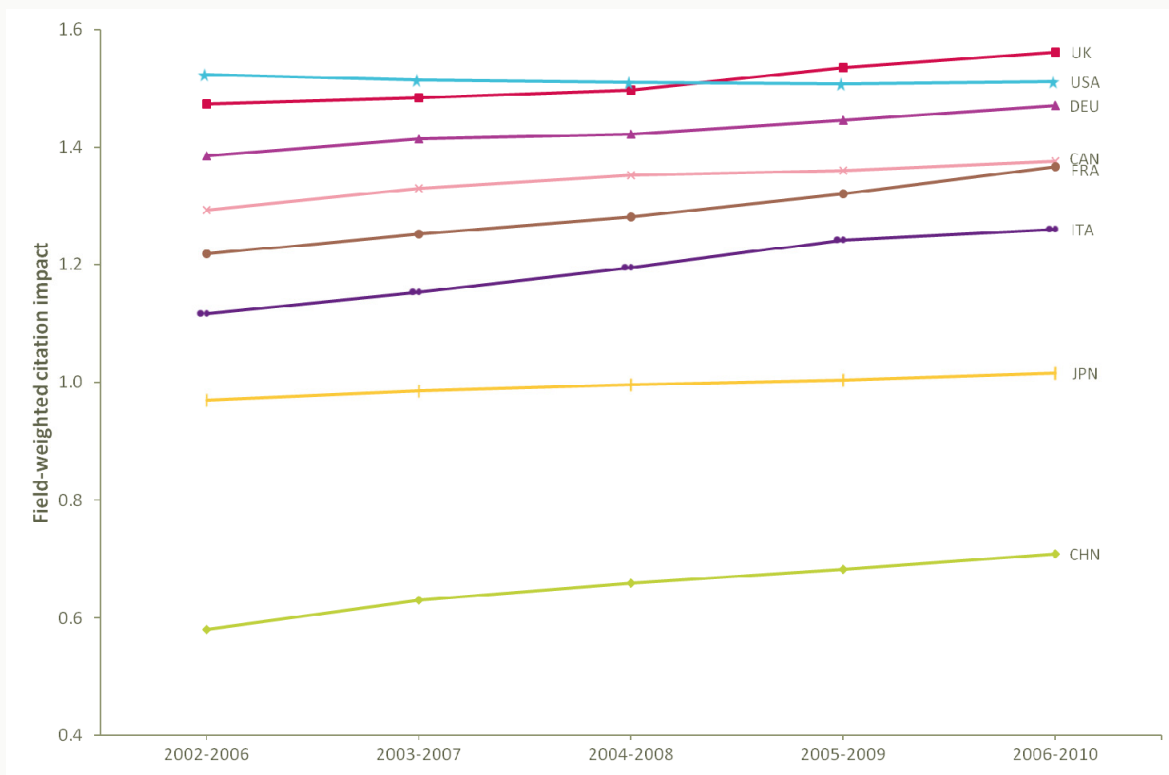


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.00	1.07	0.07	1.64%	-	-
G8	0.91	0.96	0.05	1.32%	2	3
EU-27	0.94	0.97	0.04	0.97%	11	11
OECD	0.87	0.89	0.02	0.54%	14	13
World	1.00	1.00	-	-	18	19

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

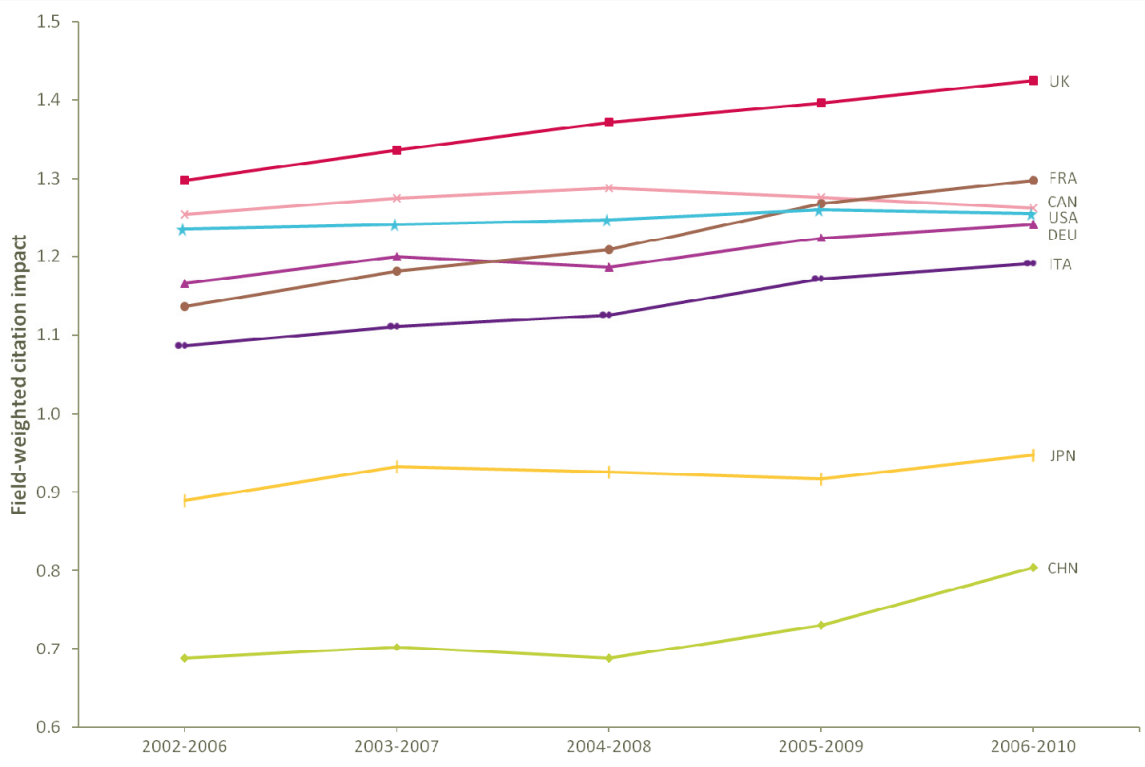
Field-weighted citation impact– Biological Sciences (BIS3)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.47	1.56	0.09	1.44%	-	-
G8	1.29	1.31	0.03	0.50%	2	1
EU-27	1.20	1.26	0.06	1.23%	1	2
OECD	1.14	1.14	-0.01	-0.15%	4	4
World	1.00	1.00	-	-	4	4

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

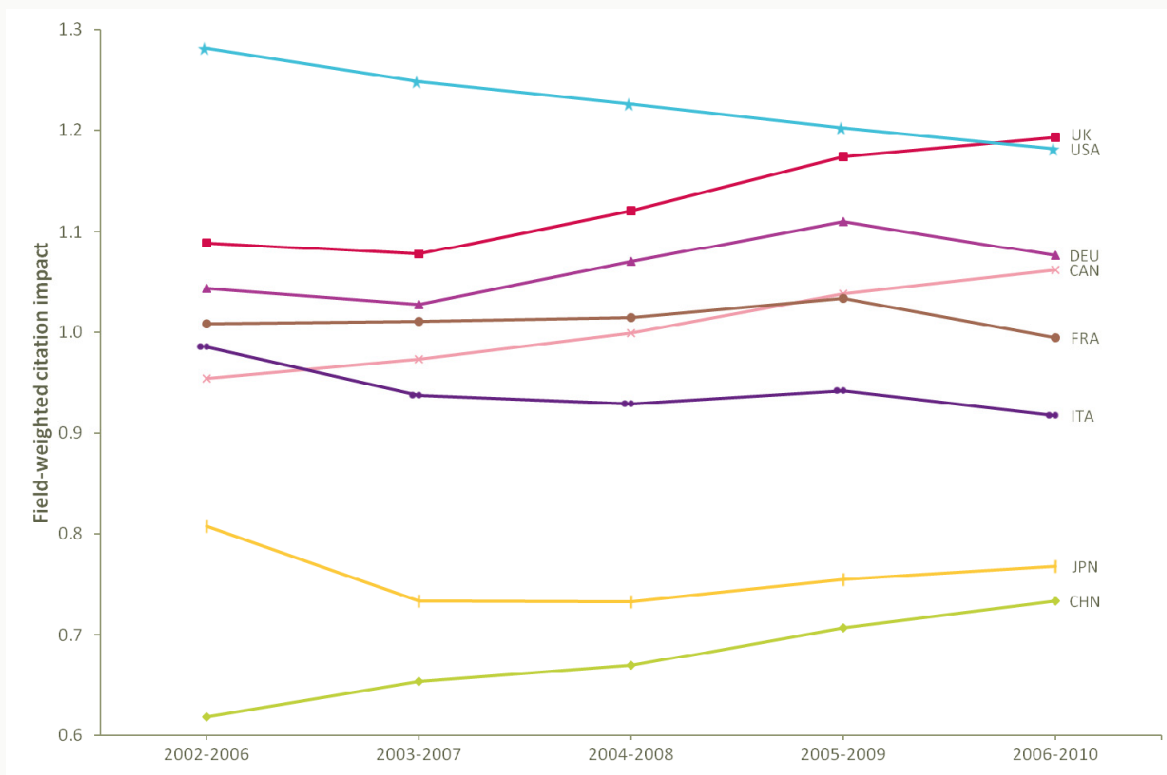
Field-weighted citation impact – Environmental Sciences (BIS4)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.30	1.42	0.13	2.34%	-	-
G8	1.12	1.17	0.04	0.94%	1	1
EU-27	1.10	1.20	0.10	2.15%	5	6
OECD	1.01	1.05	0.04	1.00%	8	7
World	1.00	1.00	-	-	8	9

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Field-weighted citation impact– Mathematics (BIS5)

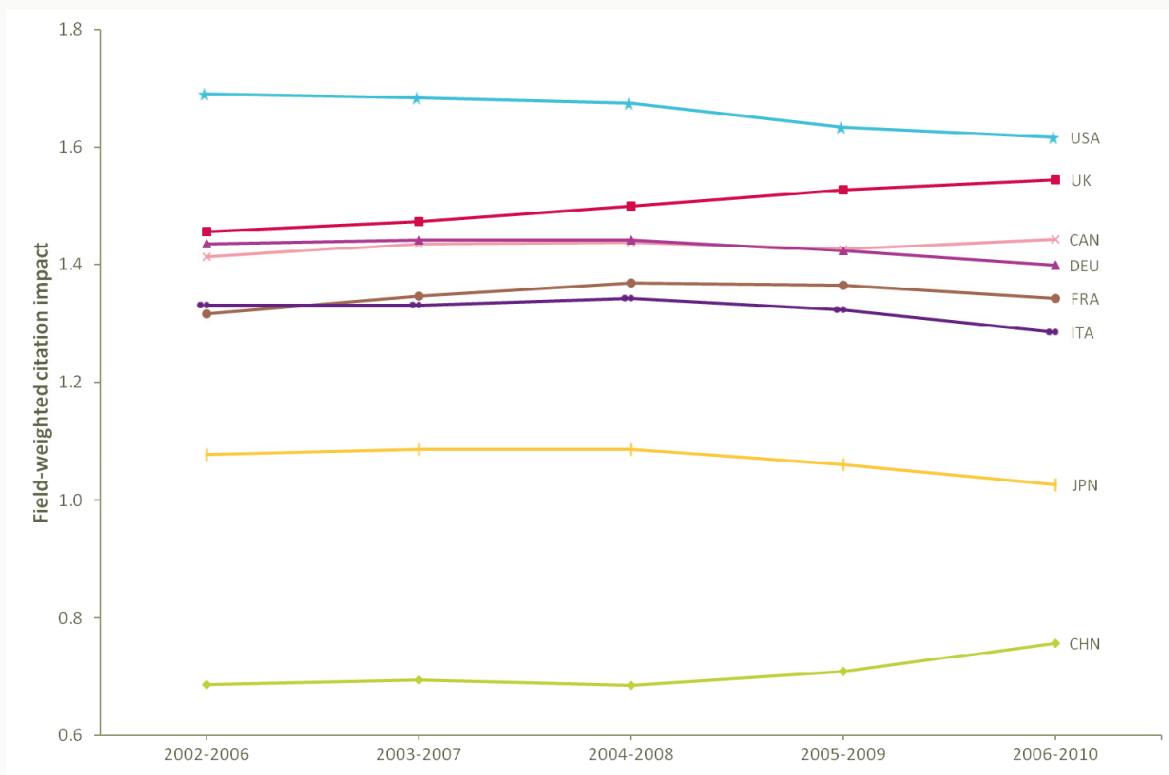


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.09	1.19	0.10	2.31%	-	-
G8	1.03	1.00	-0.03	-0.65%	2	1
EU-27	0.95	0.98	0.03	0.67%	4	5
OECD	0.90	0.90	0.00	-0.11%	7	7
World	1.00	1.00	-	-	8	12

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

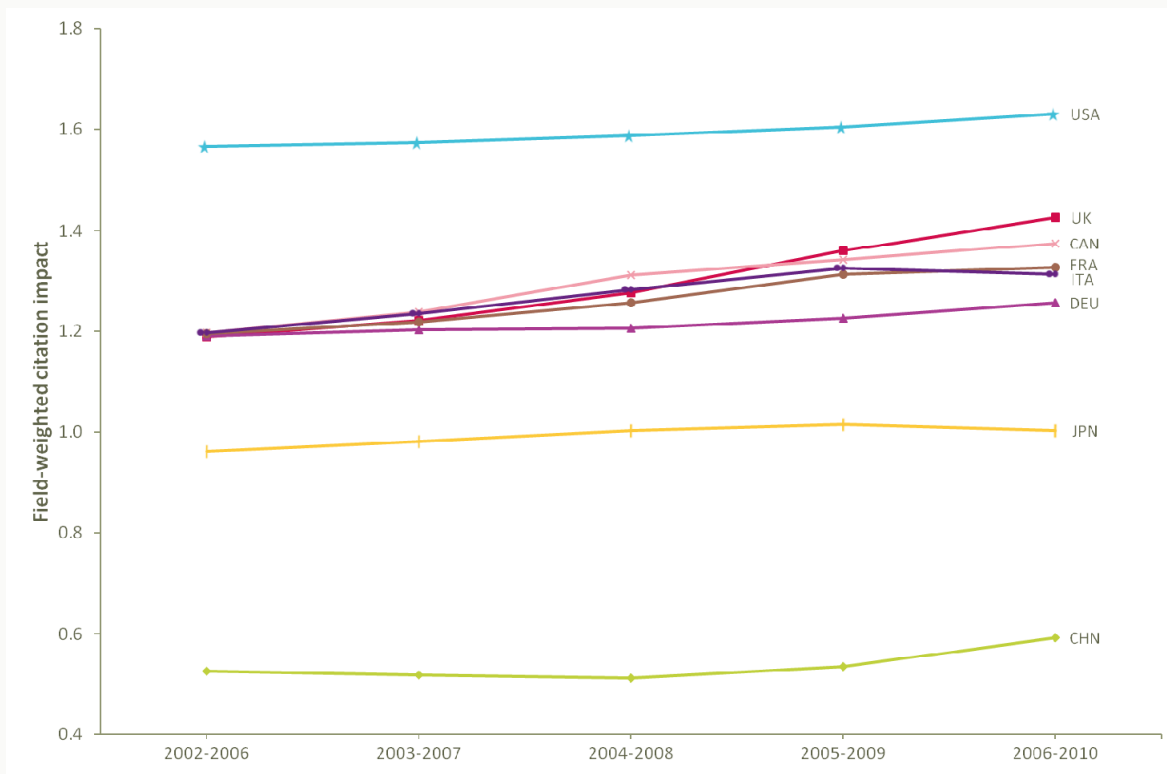
Field-weighted citation impact – Physical Sciences (BIS6)



	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.46	1.55	0.09	1.48%	-	-
G8	1.30	1.28	-0.02	-0.39%	2	2
EU-27	1.25	1.24	0.00	-0.08%	3	4
OECD	1.13	1.08	-0.05	-1.10%	8	8
World	1.00	1.00	-	-	8	8

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Field-weighted citation impact – Engineering (BIS7)

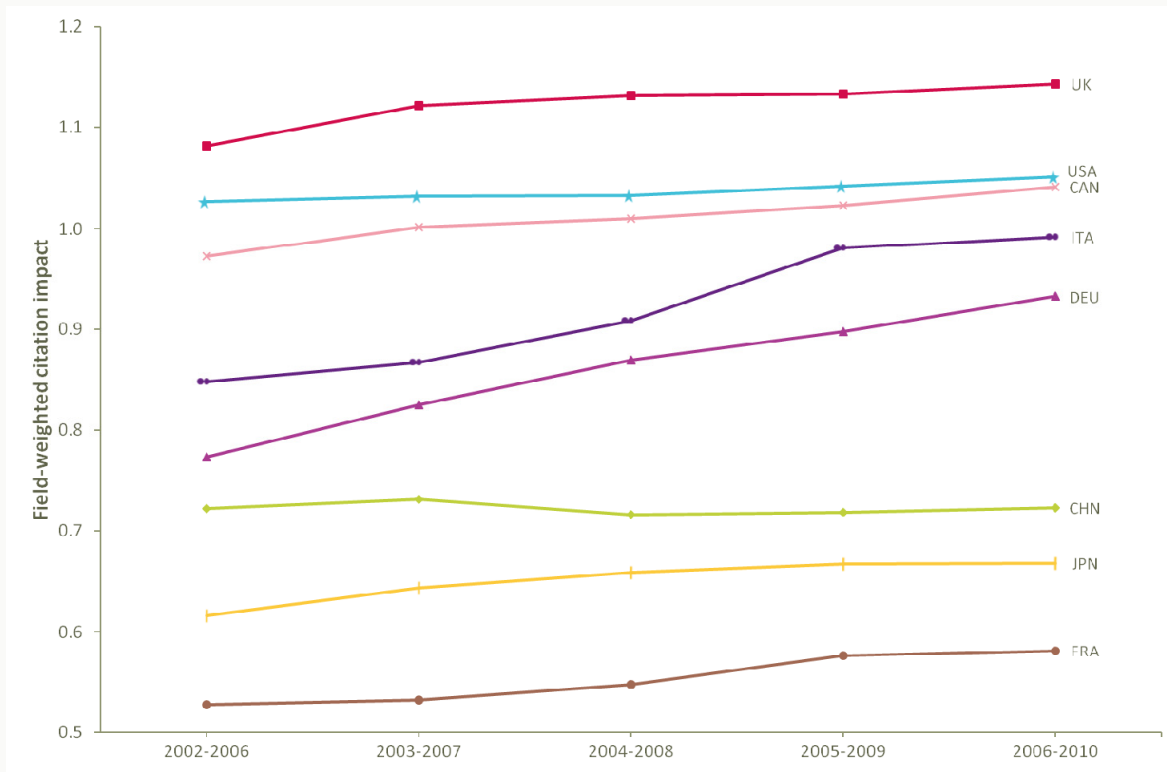


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.19	1.43	0.24	4.67%	-	-
G8	1.21	1.30	0.10	1.93%	6	2
EU-27	1.12	1.24	0.12	2.54%	10	6
OECD	1.02	1.03	0.00	0.12%	14	10
World	1.00	1.00	-	-	16	11

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Field-weighted citation impact – Social Sciences (BIS8)

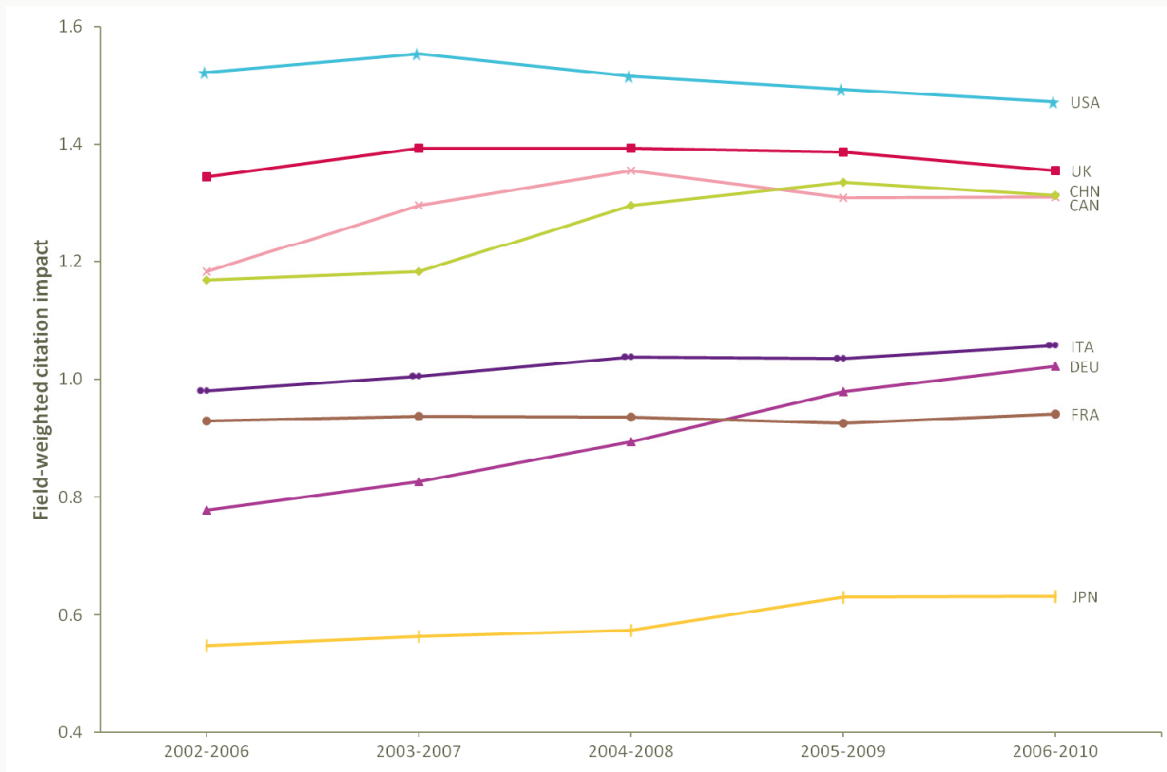


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UKrank 2006	UKrank 2010
UK	1.08	1.14	0.06	1.38%	-	-
G8	0.95	0.99	0.04	1.09%	1	1
EU-27	0.88	0.96	0.09	2.45%	3	4
OECD	0.90	0.93	0.04	0.99%	4	6
World	1.00	1.00	-	-	4	7

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Field-weighted citation impact – Business (BIS9)

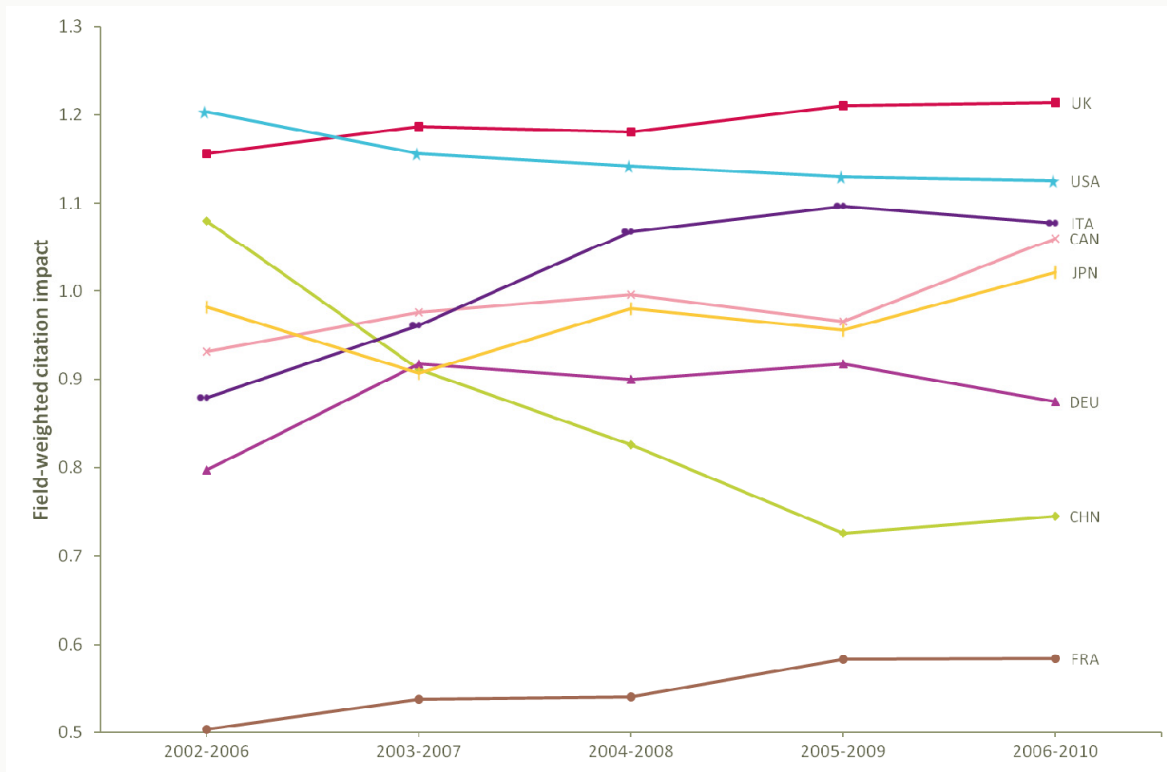


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.35	1.36	0.01	0.19%	-	-
G8	1.29	1.29	0.00	0.06%	2	2
EU-27	1.04	1.15	0.11	2.51%	4	5
OECD	1.17	1.20	0.03	0.61%	5	6
World	1.00	1.00	-	-	7	11

World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Field-weighted citation impact – Humanities (BIS10)

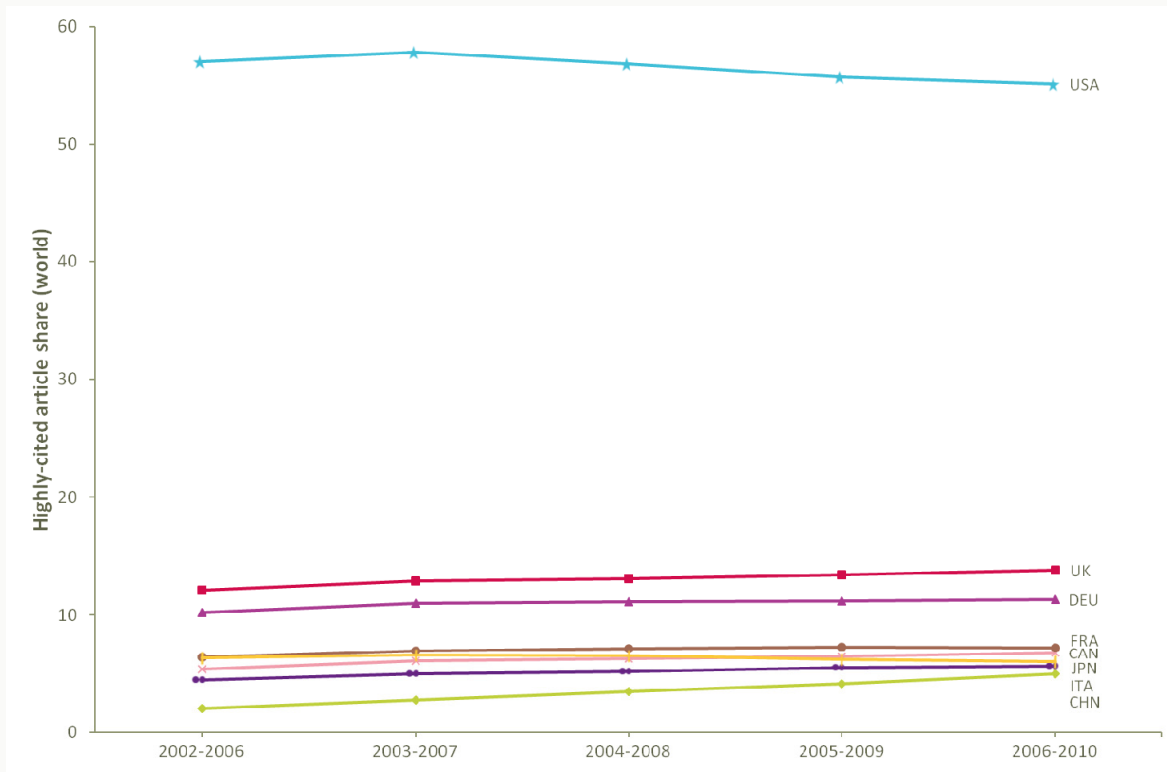


Source: Scopus

	2006	2010	Change 06-10	CAGR 06-10	UK rank 2006	UK rank 2010
UK	1.16	1.21	0.06	1.21%	-	-
G8					2	1
EU-27	0.85	0.94	0.09	2.67%	2	2
OECD	0.95	0.93	-0.02	-0.48%	3	4
World	1.00	1.00	-	-	6	8

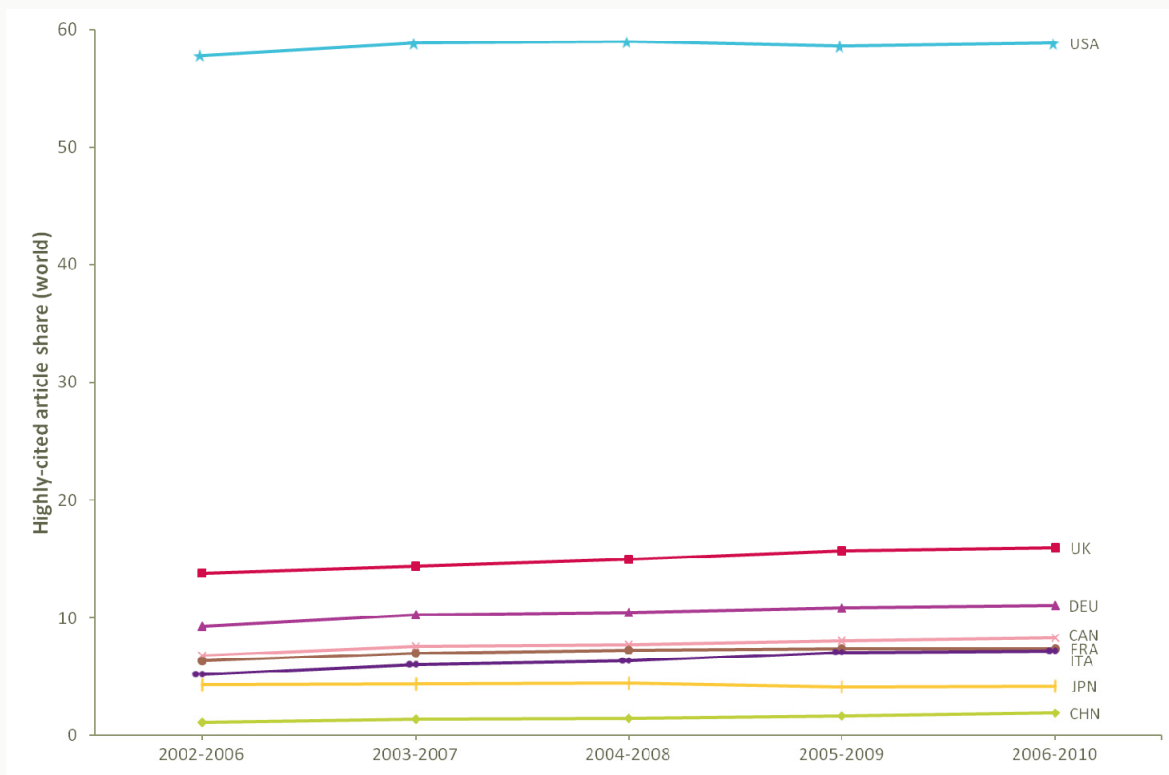
World data are for 229 countries with at least 1 article in 2010. World rankings out of 89 countries (of 229) with at least 500 articles in 2010. Includes all 42 OECD countries and accounts for over 99% of the world total output.

Highly-cited article share (world)



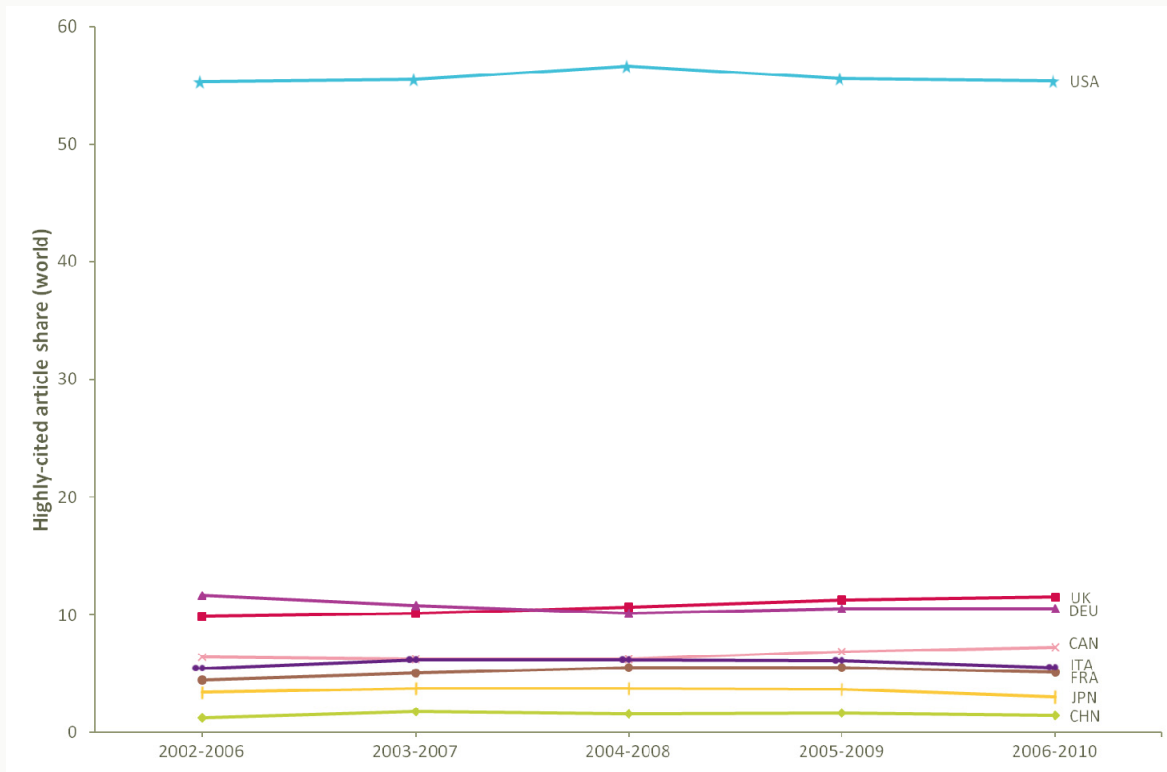
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	12.09	13.80	1.71	3.4%
	5th percentile	11.15	11.75	0.60	1.3%
	10th percentile	10.58	10.75	0.17	0.4%

Highly-cited article share (world) – Clinical Sciences (BIS1)



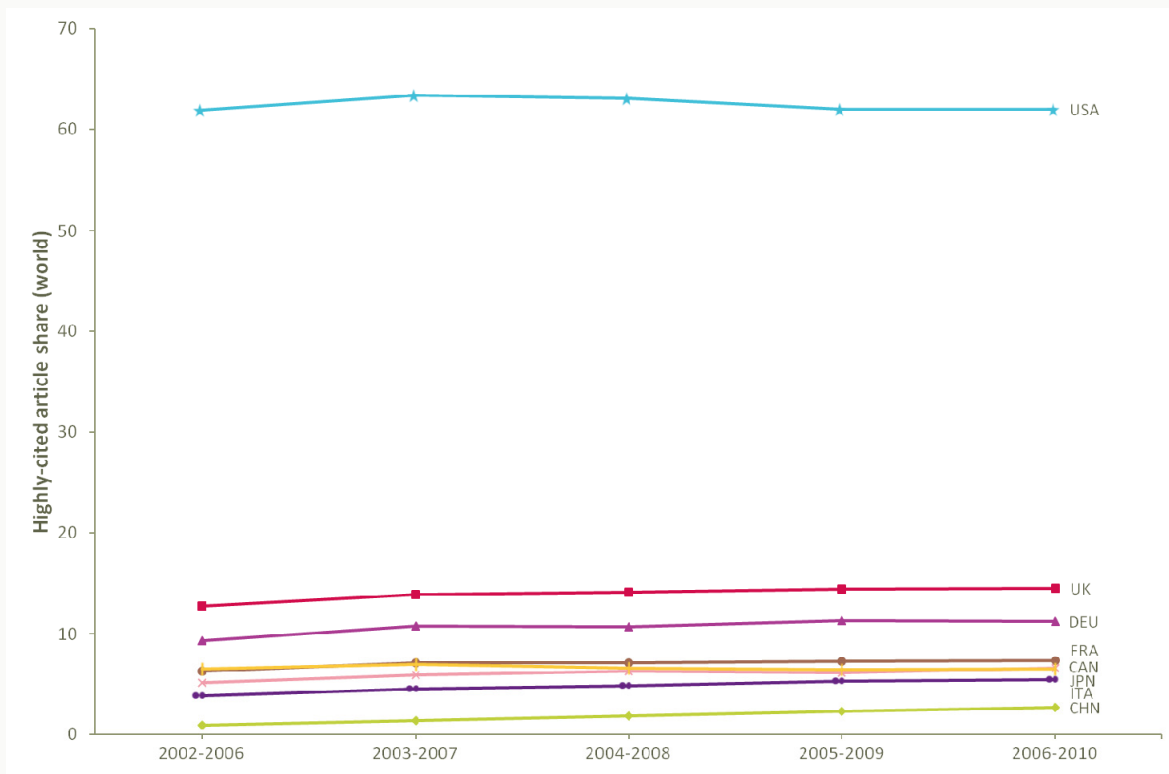
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	13.80	15.95	2.15	3.7%
	5th percentile	12.51	13.64	1.13	2.2%
	10th percentile	11.95	12.59	0.64	1.3%

Highly-cited article share (world) – Health & Medical Sciences (BIS2)



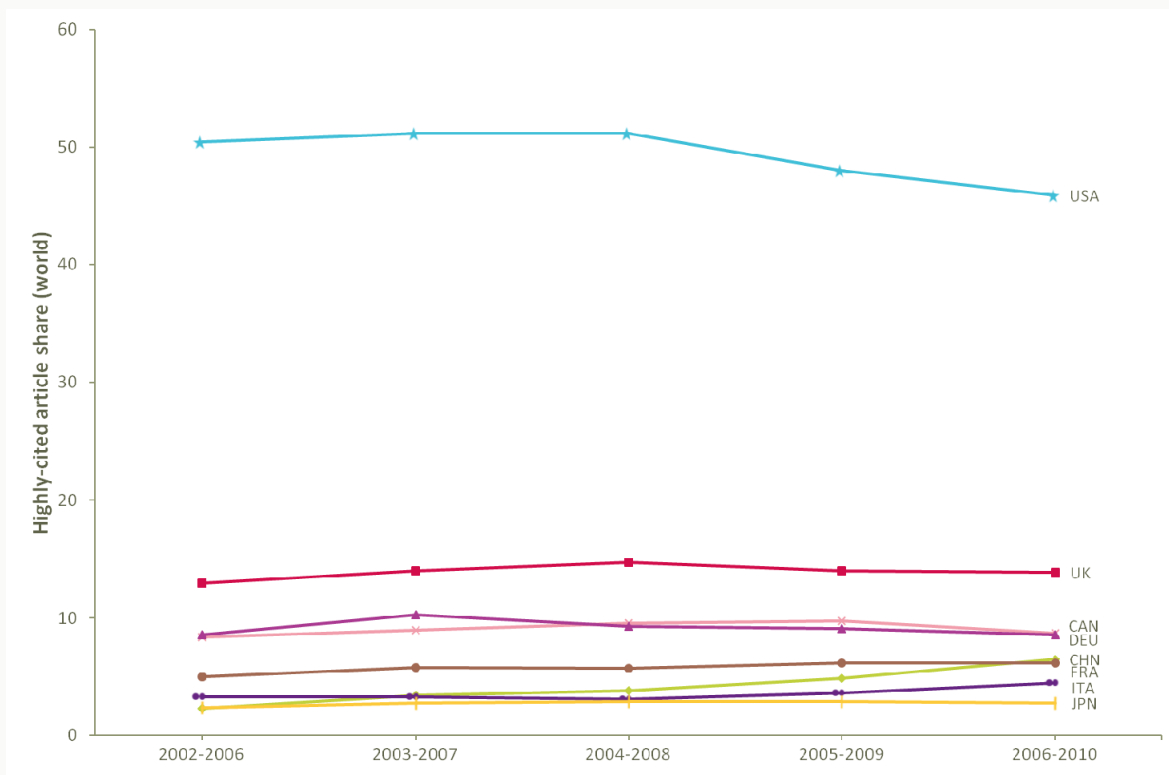
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	9.88	11.50	1.62	3.9%
	5th percentile	10.38	11.48	1.11	2.6%
	10th percentile	10.56	11.34	0.78	1.8%

Highly-cited article share (world) – Biological Sciences (BIS3)



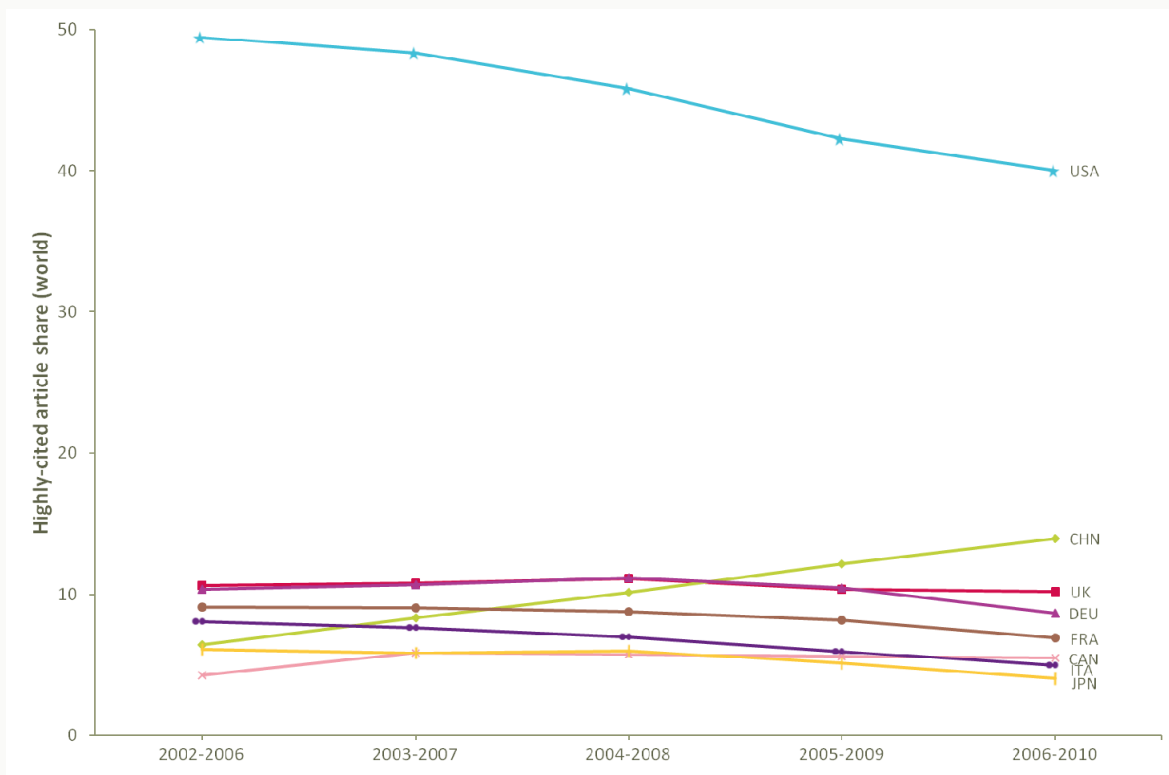
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	12.76	14.54	1.78	3.3%
	5th percentile	12.31	12.86	0.55	1.1%
	10th percentile	11.72	11.89	0.18	0.4%

Highly-cited article share (world) – Environmental Sciences (BIS4)



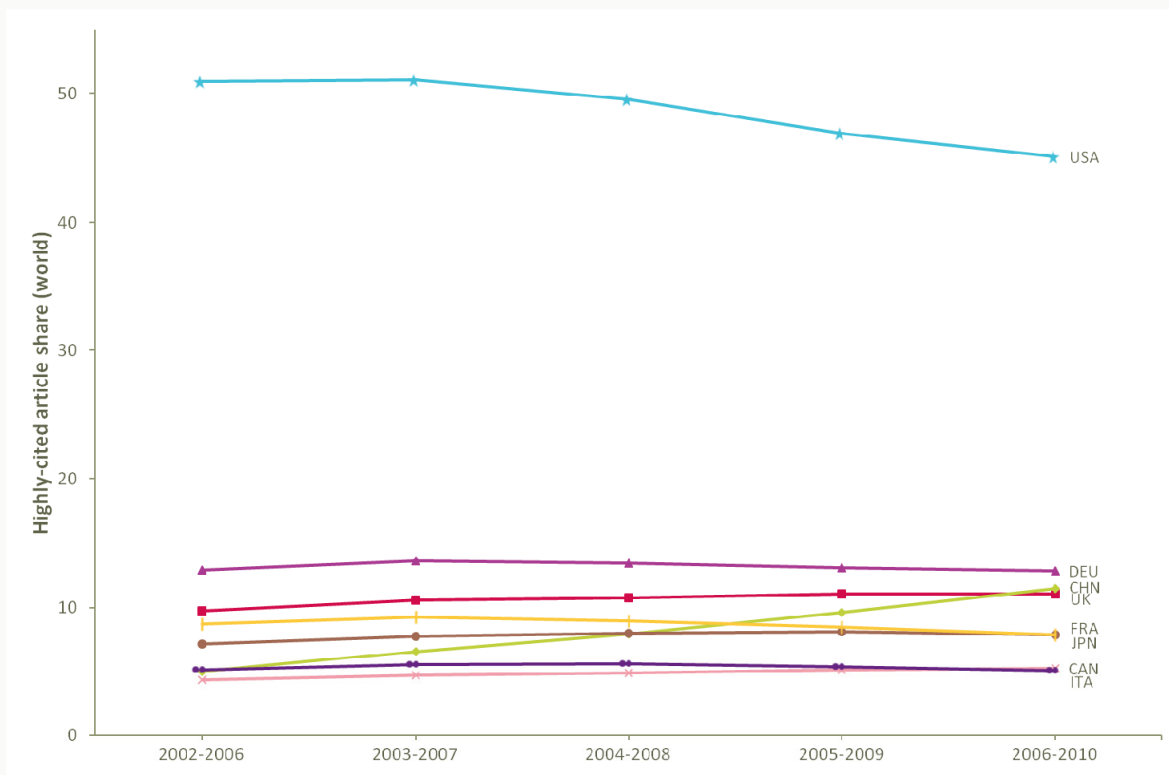
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	12.95	13.86	0.91	1.7%
	5th percentile	11.67	12.00	0.33	0.7%
	10th percentile	11.45	11.26	-0.19	-0.4%

Highly-cited article share (world) – Mathematics (BIS5)



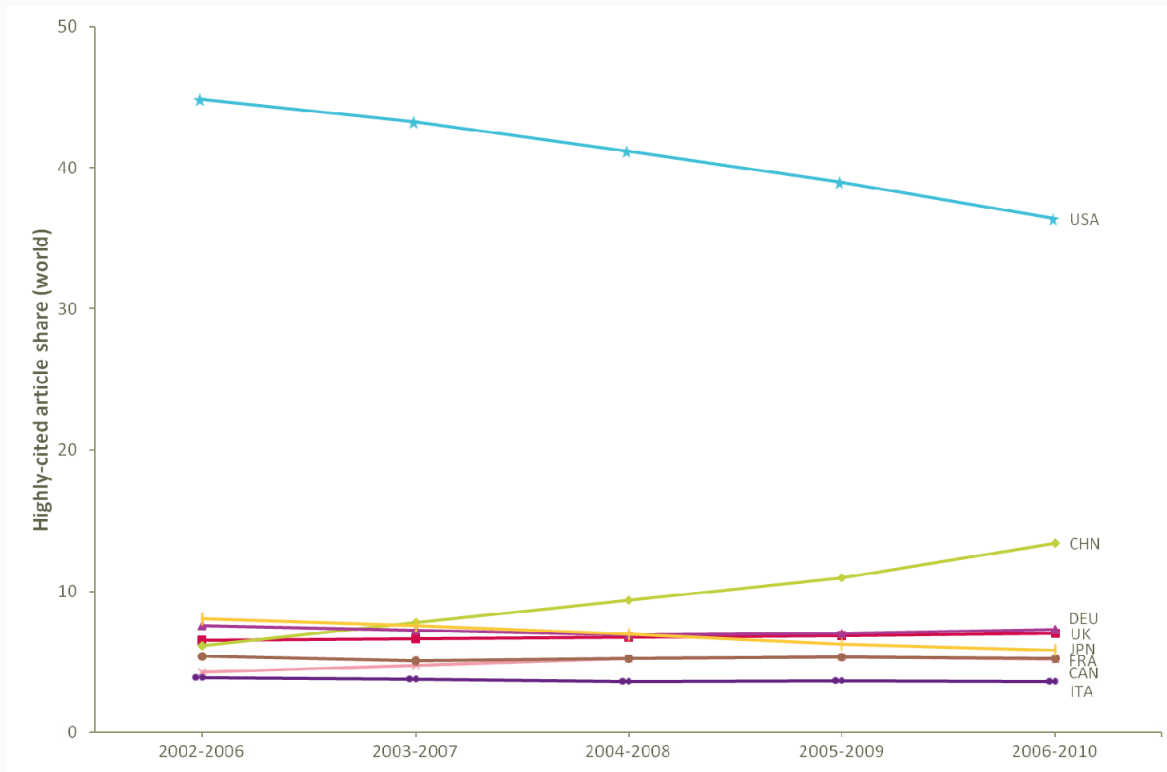
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	10.65	10.22	-0.44	-1.0%
	5th percentile	9.31	9.11	-0.20	-0.5%
	10th percentile	8.57	8.35	-0.22	-0.7%

Highly-cited article share (world) – Physical Sciences (BIS6)



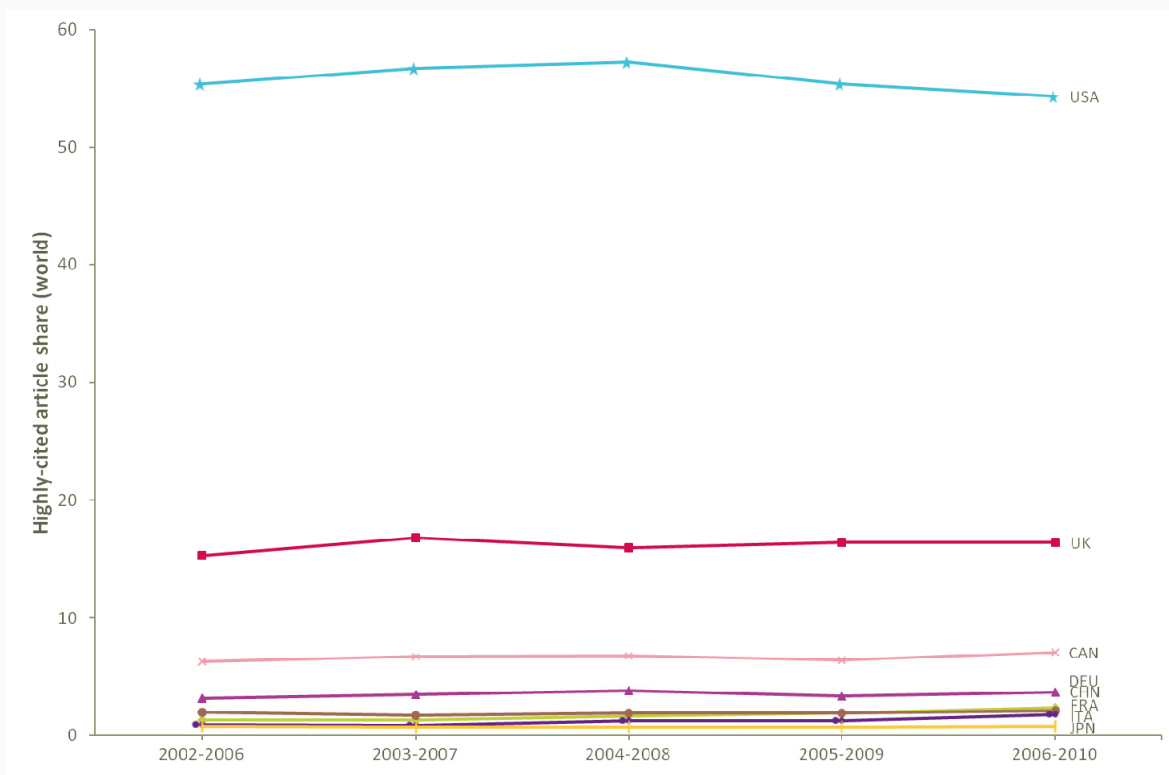
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	9.70	11.06	1.36	3.3%
	5th percentile	9.23	9.67	0.44	1.2%
	10th percentile	8.93	8.89	-0.05	-0.1%

Highly-cited article share (world) – Engineering (BIS7)



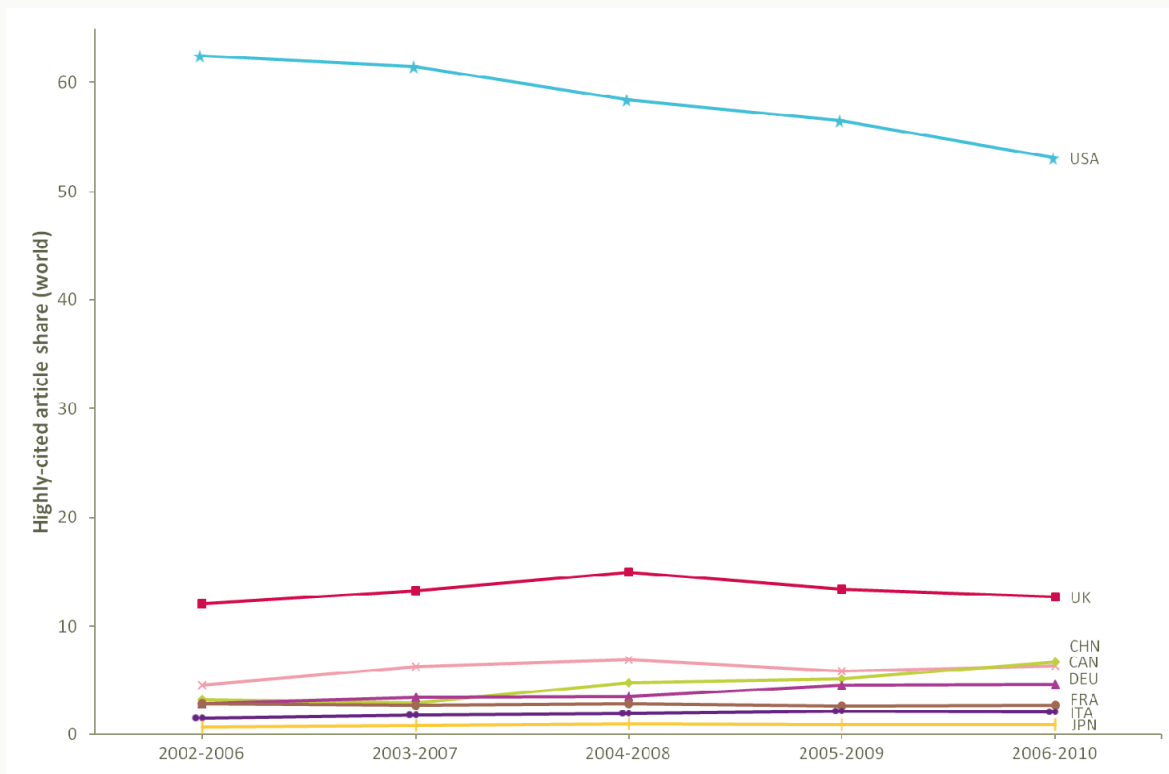
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	6.59	7.03	0.44	1.6%
	5th percentile	6.83	6.70	-0.13	-0.5%
	10th percentile	6.58	6.43	-0.15	-0.6%

Highly-cited article share (world) – Social Sciences (BIS8)



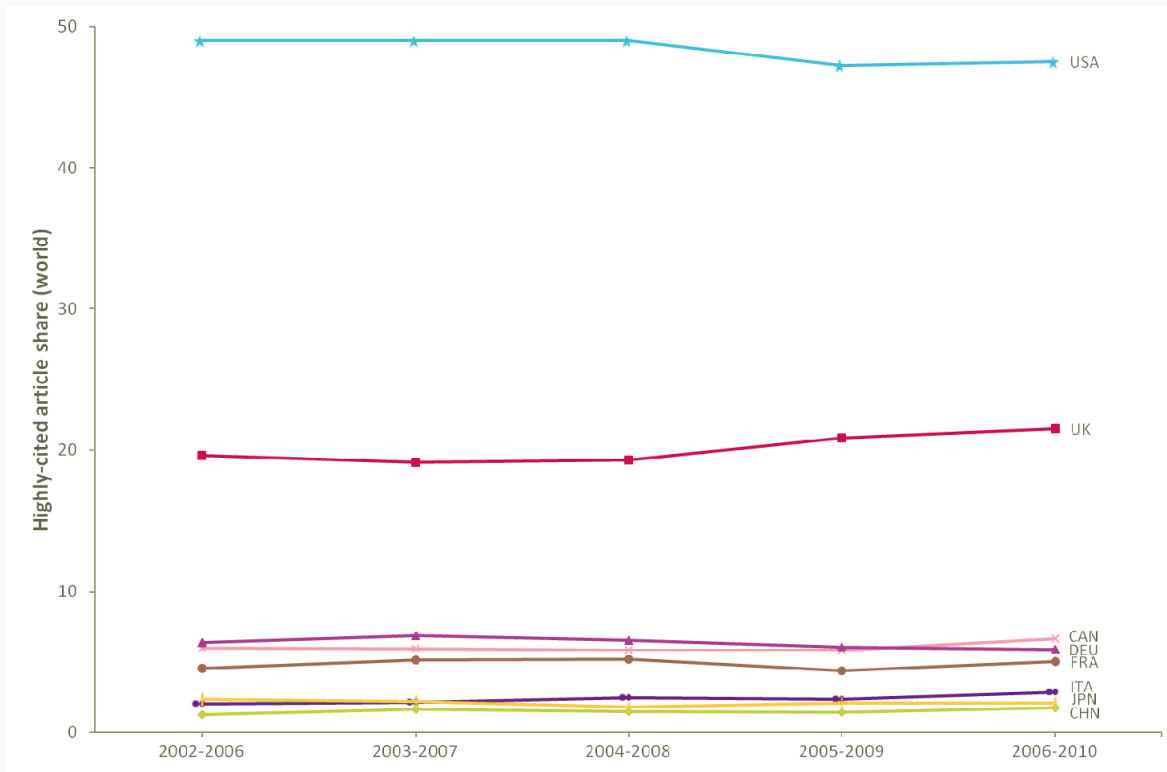
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	15.29	16.43	1.14	1.8%
	5th percentile	15.99	17.05	1.06	1.6%
	10th percentile	15.86	16.09	0.23	0.4%

Highly-cited article share (world) – Business (BIS9)



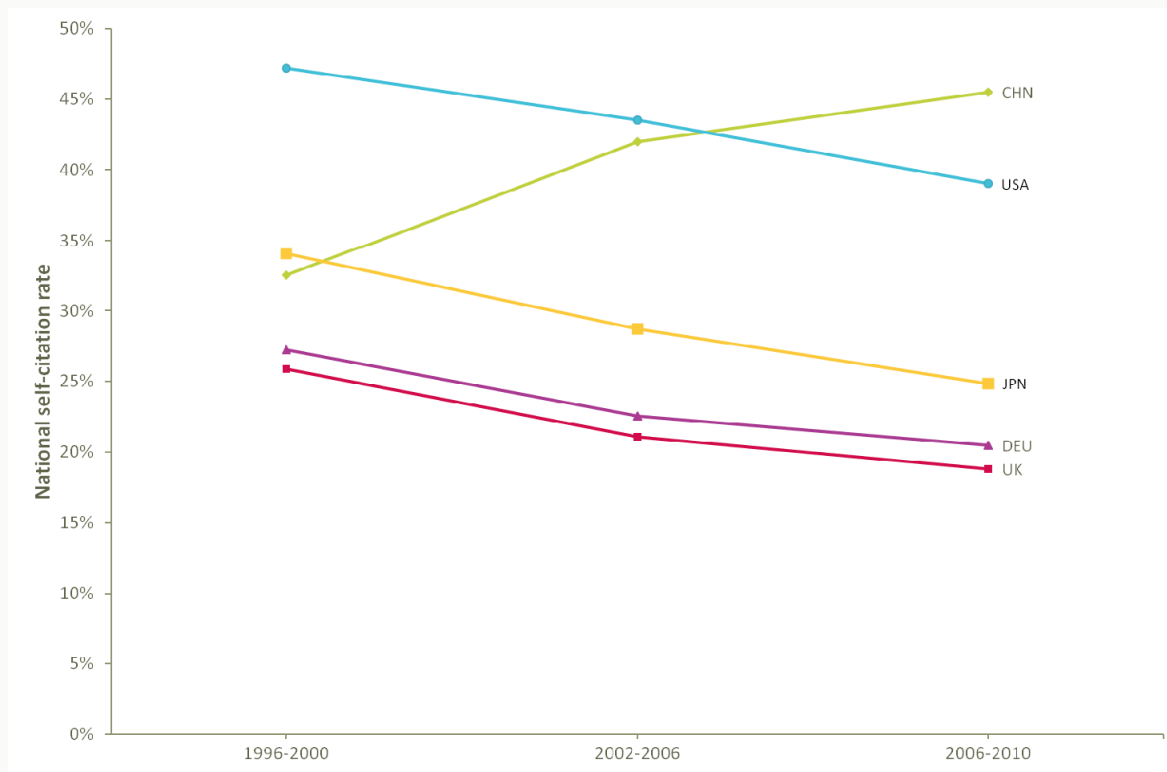
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	12.10	12.72	0.62	1.3%
	5th percentile	13.41	13.65	0.24	0.4%
	10th percentile	13.54	13.50	-0.04	-0.1%

Highly-cited article share (world) – Humanities (BIS10)



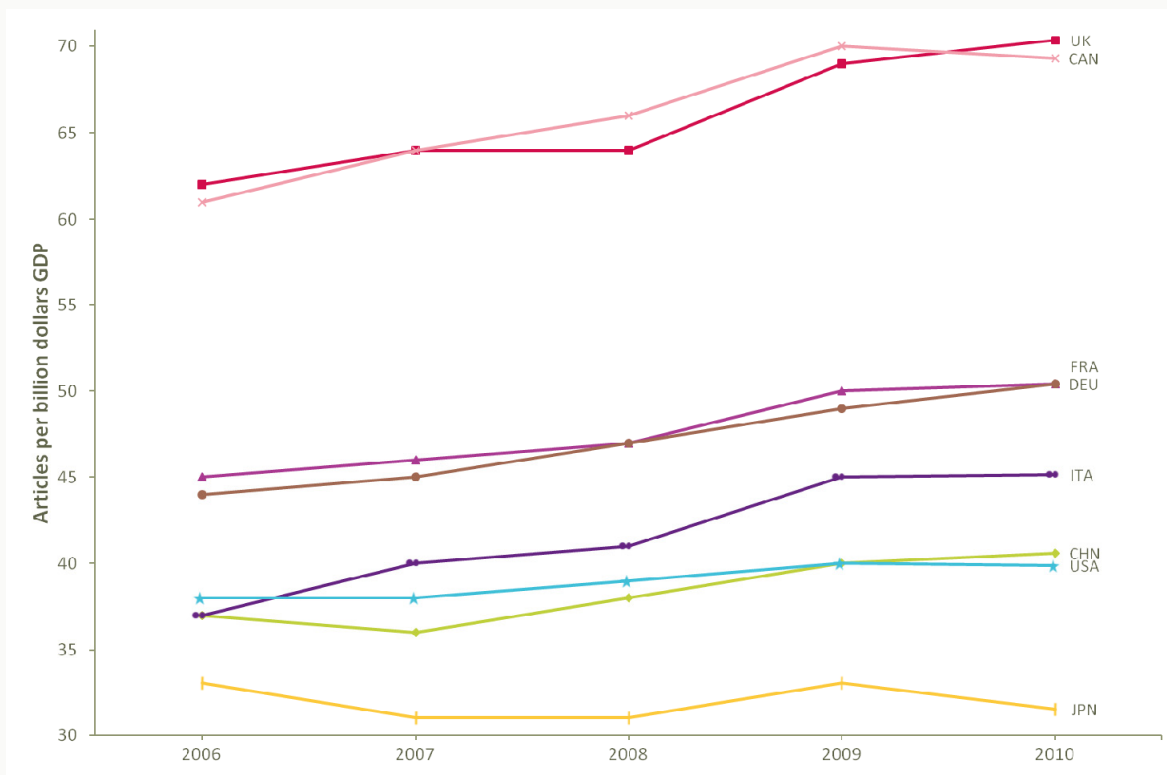
		2006	2010	Change 06-10	CAGR 06-10
UK	1st percentile	19.61	21.51	1.90	2.3%
	5th percentile	16.03	18.45	2.42	3.6%
	10th percentile	13.65	15.05	1.40	2.5%

National self-citation rates – UK and comparator countries



Source: Scopus

Articles per billion dollars GDP - UK and comparator countries

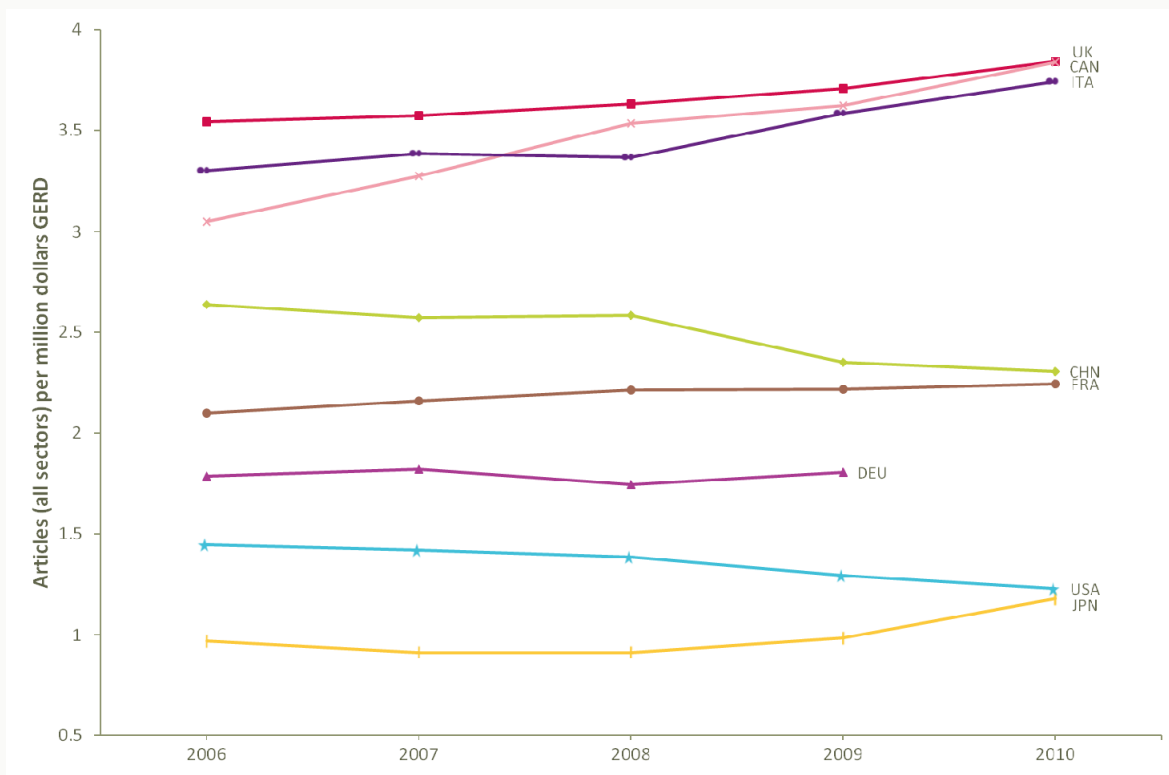


Source: Scopus and OECD MSTI

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	62.00	70.35	8.35	3.21%	-	-
G8	36.13	38.51	2.38	1.61%	1	1
EU-27	42.00	48.30	6.30	3.56%	6	7
OECD	43.91	51.43	7.53	4.04%	9	12

G8 rankings out of 8 (of 8) countries with available data
 EU27 rankings out of 21 (of 27) countries with available data
 OECD rankings out of 37 (of 42) countries with available data

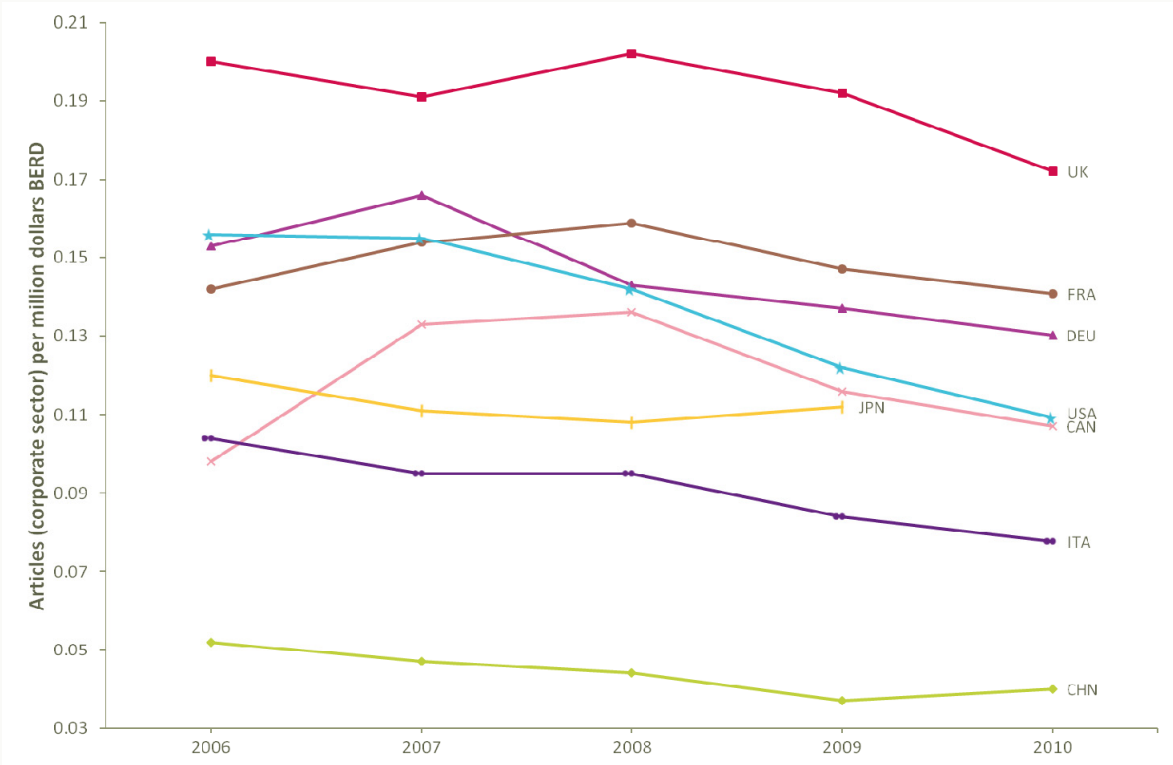
Articles (all sectors) per million dollars GERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	3.54	3.84	0.30	2.05%	-	-
G8	1.66	1.61	-0.05	-0.71%	1	1
EU-27	2.37	2.57	0.20	2.06%	9	10
OECD	1.95	1.91	-0.04	-0.55%	11	11

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 20 (of 27) countries with available data
 OECD rankings out of 34 (of 42) countries with available data

Articles (corporate sector) per million dollars BERD - UK and comparator countries

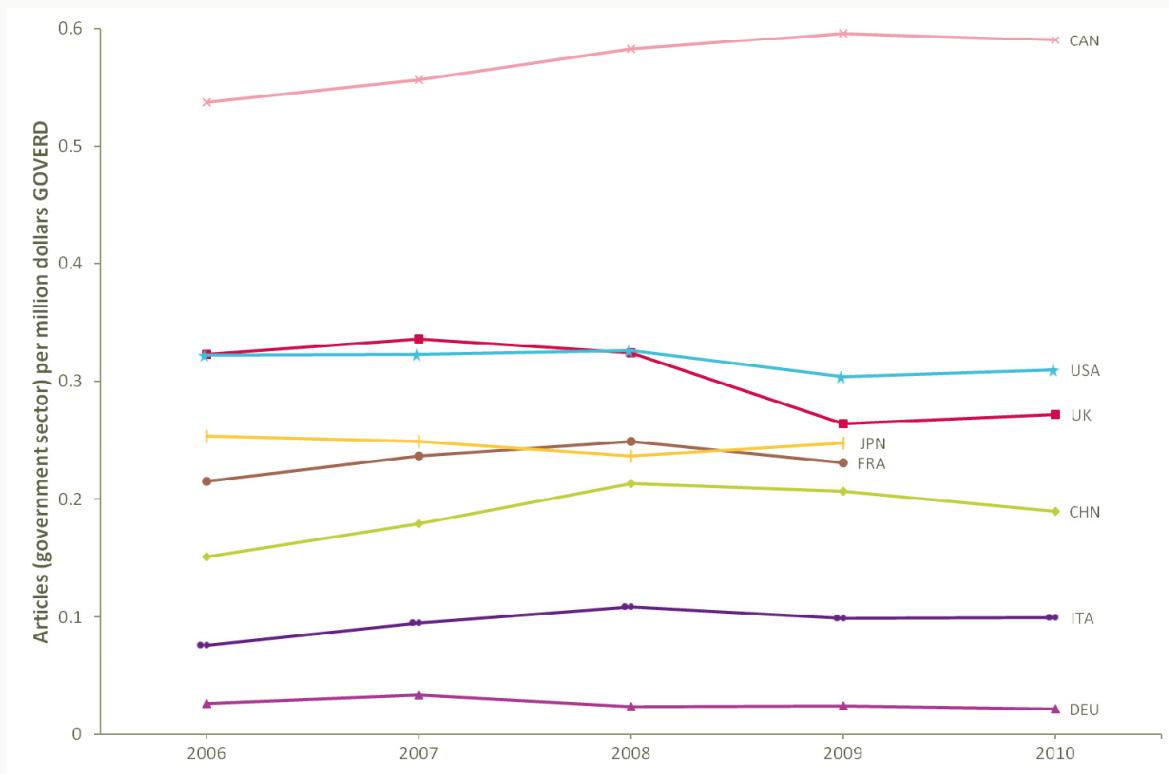


	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	0.20	0.17	-0.03	-3.67%	-	-
EU-27	0.15	0.14	-0.01	-2.31%	5	6

EU27 rankings out of 19 (of 27) countries with available data

Source: Scopus and OECD MSTI

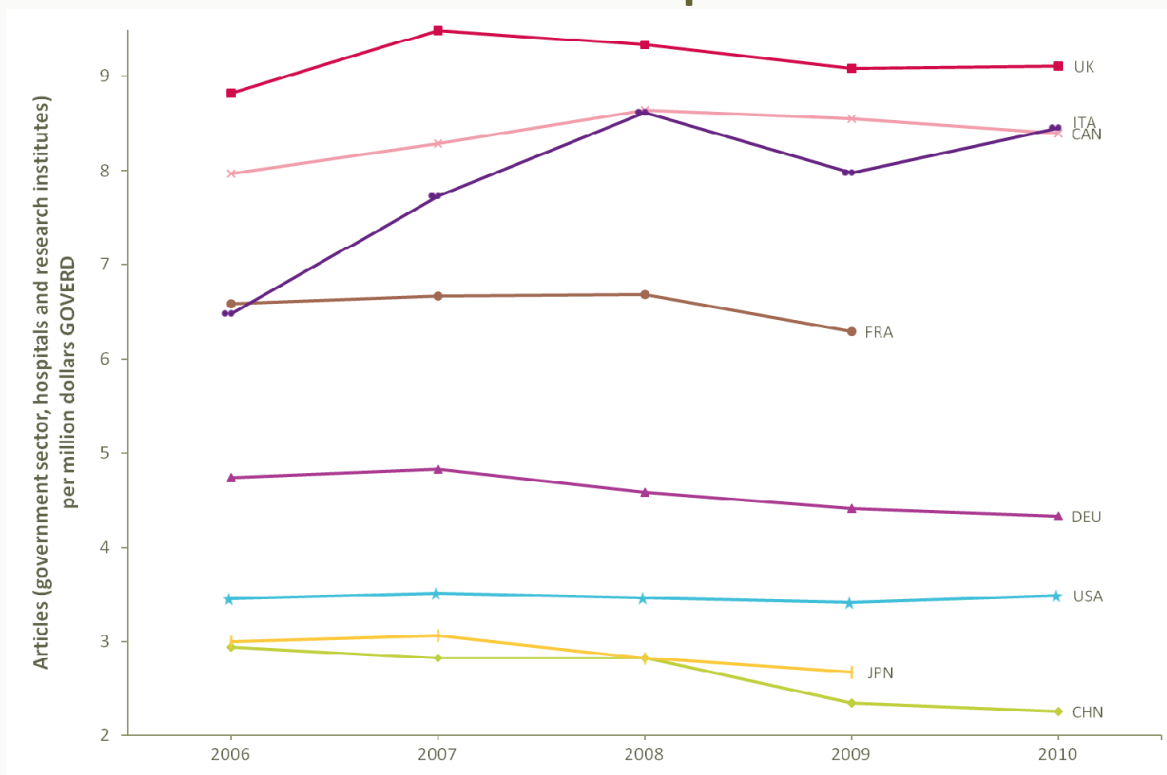
Articles (government sector) per million dollars GOVERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	0.32	0.27	-0.05	-4.21%	-	-
EU-27	0.18	0.17	-0.01	-1.69%	5	4

EU27 rankings out of 17 (of 27) countries with available data

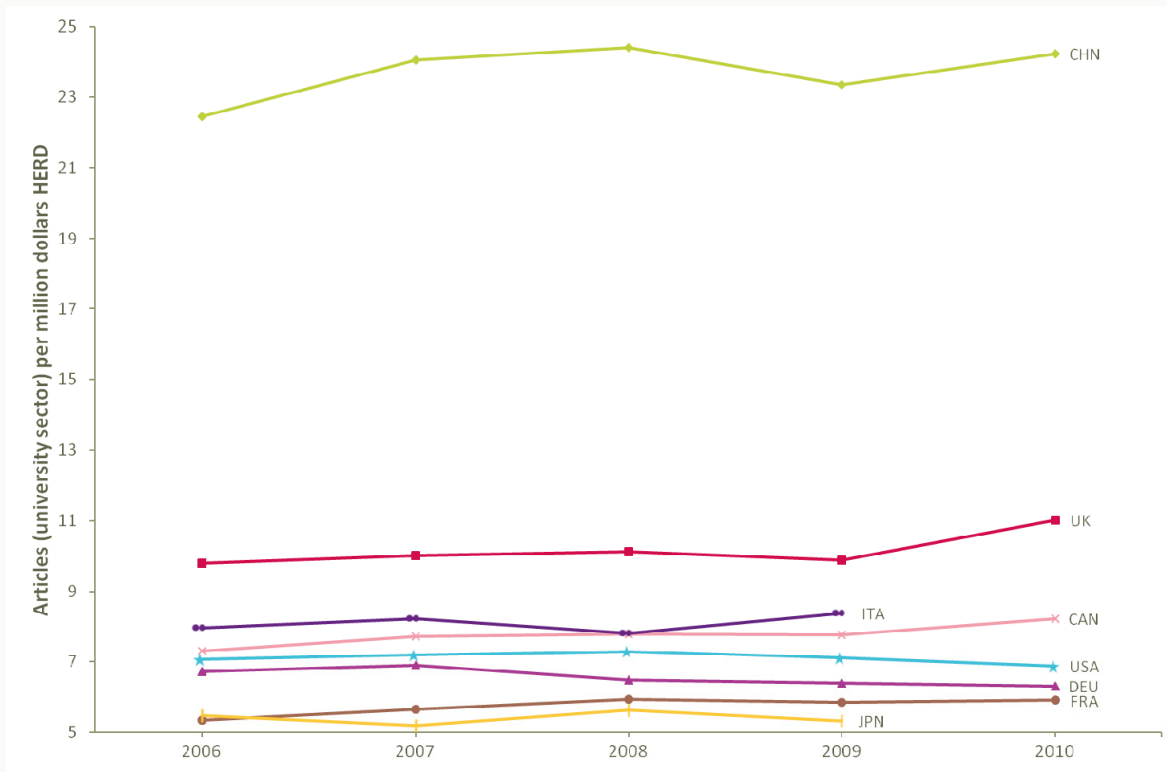
Articles (government sector, hospitals and research institutes) per million dollars GOVERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	8.82	9.10	0.28	0.79%	-	-
EU-27	6.59	6.34	-0.25	-0.97%	7	6

EU27 rankings out of 16 (of 27) countries with available data

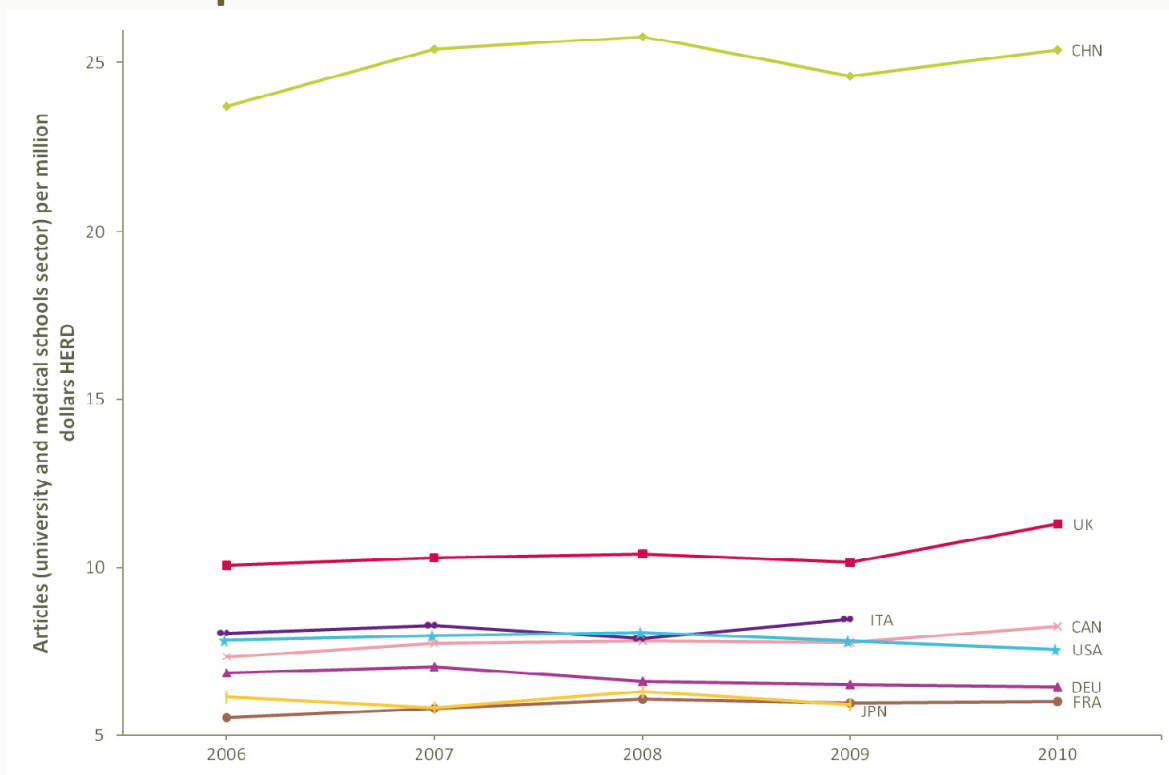
Articles (university sector) per million dollars HERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	9.79	11.03	1.24	3.02%	-	-
EU-27	7.03	7.05	0.03	0.10%	5	4

EU27 rankings out of 17 (of 27) countries with available data

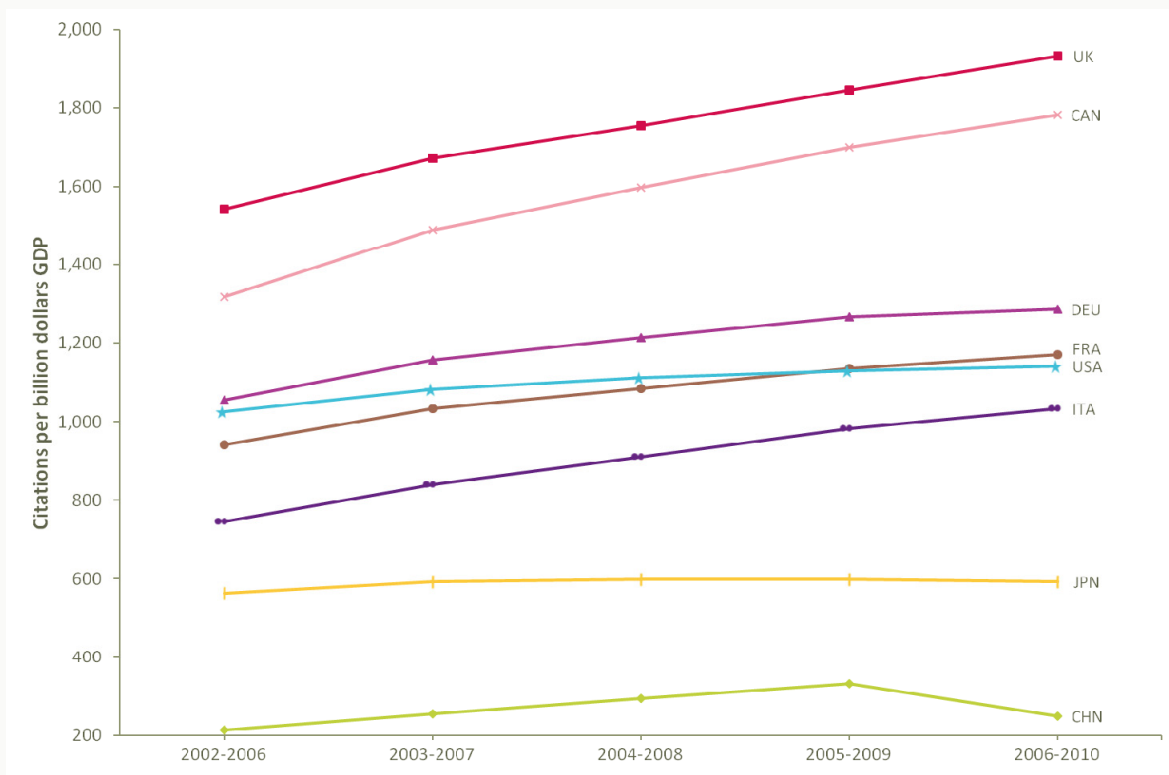
Articles (university and medical schools sector) per million dollars HERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	10.06	11.31	1.25	2.97%	-	-
EU-27	7.41	7.38	-0.03	-0.10%	5	4

EU27 rankings out of 17 (of 27) countries with available data

Citations per billion dollars GDP - UK and comparator countries

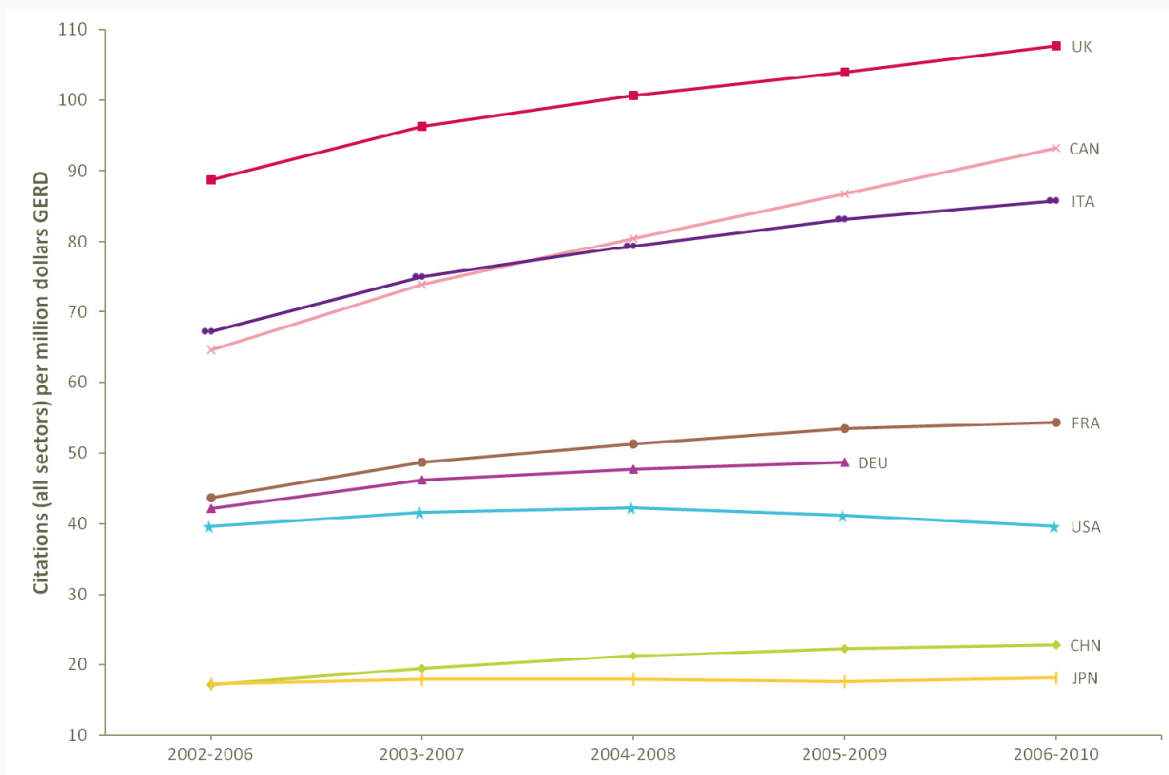


	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	1,543	1,931	388	5.77%	-	-
G8	767	902	135	4.14%	1	1
EU-27	847	1,032	185	5.06%	5	5
OECD	712	886	174	5.62%	8	9

G8 rankings out of 8 (of 8) countries with available data
 EU27 rankings out of 21 (of 27) countries with available data
 OECD rankings out of 37 (of 42) countries with available data

Source: Scopus and OECD MSTI

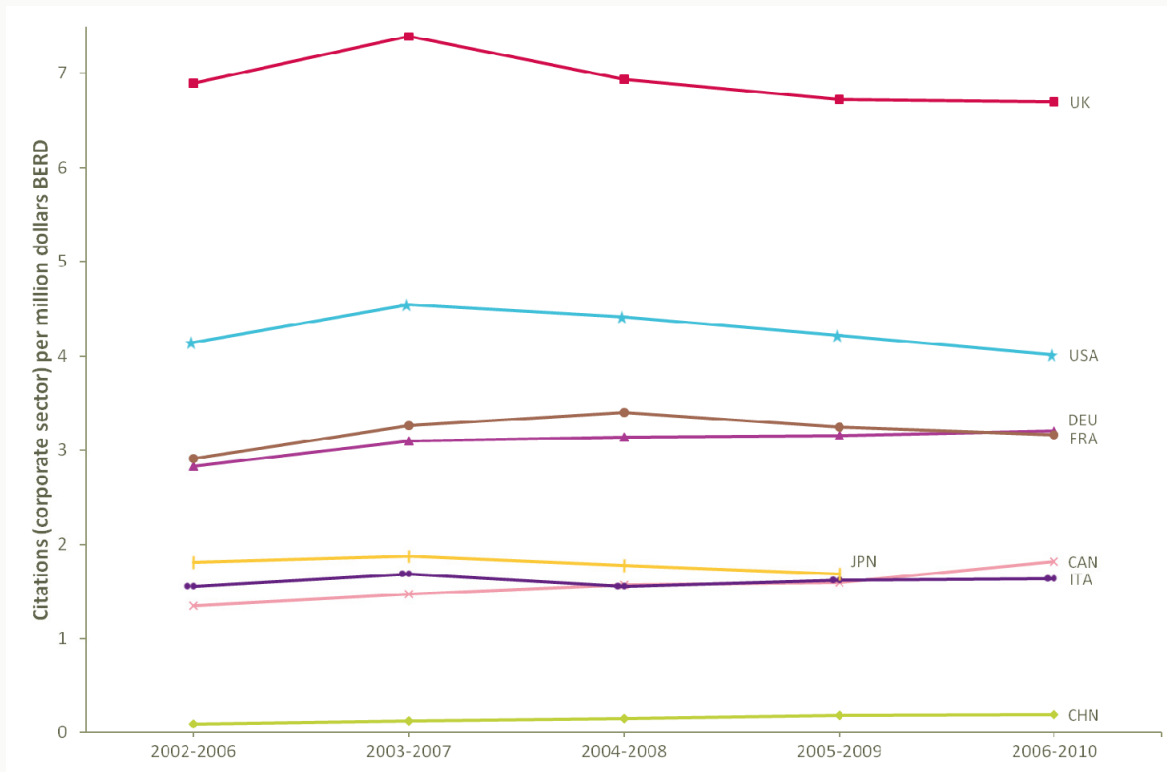
Citations (all sectors) per million dollars GERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	88.80	107.59	18.79	4.92%	-	-
G8	35.20	37.75	2.55	1.76%	1	1
EU-27	48.02	55.61	7.59	3.74%	5	4
OECD	31.70	32.94	1.24	0.96%	7	6

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 21 (of 27) countries with available data
 OECD rankings out of 34 (of 42) countries with available data

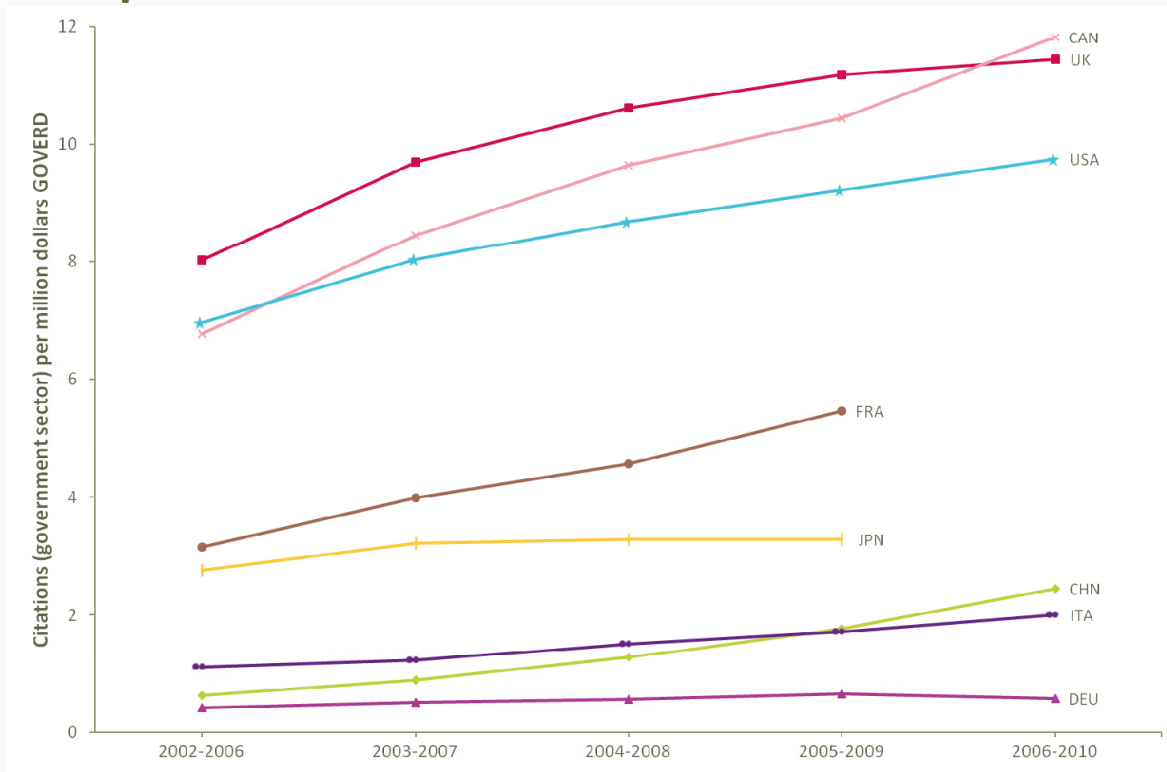
Citations (corporate sector) per million dollars BERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	6.90	6.70	-0.19	-0.71%	-	-
EU-27	3.32	3.61	0.30	2.15%	2	2

EU27 rankings out of 19 (of 27) countries with available data

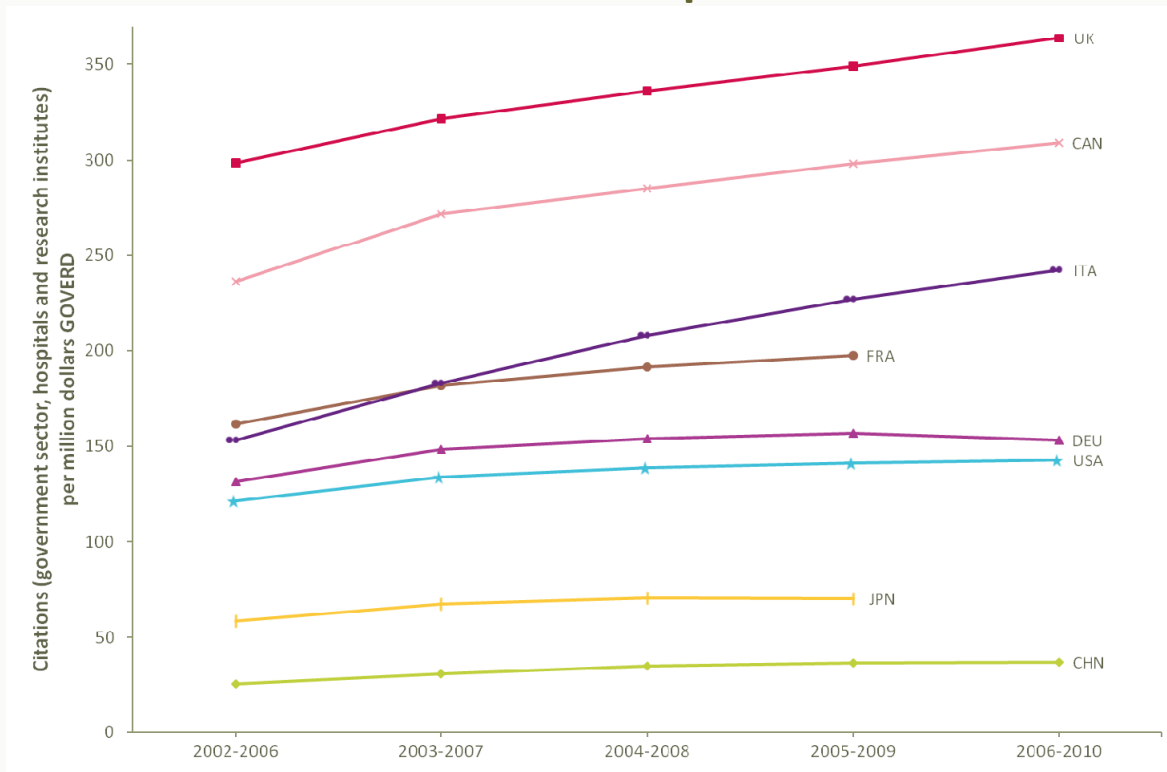
Citations (government sector) per million dollars GOVERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	8.03	11.43	3.41	9.25%	-	-
EU-27	3.57	5.04	1.47	9.01%	3	3

EU27 rankings out of 16 (of 27) countries with available data

Citations (government sector, hospitals and research institutes) per million dollars GOVERD - UK and comparator countries

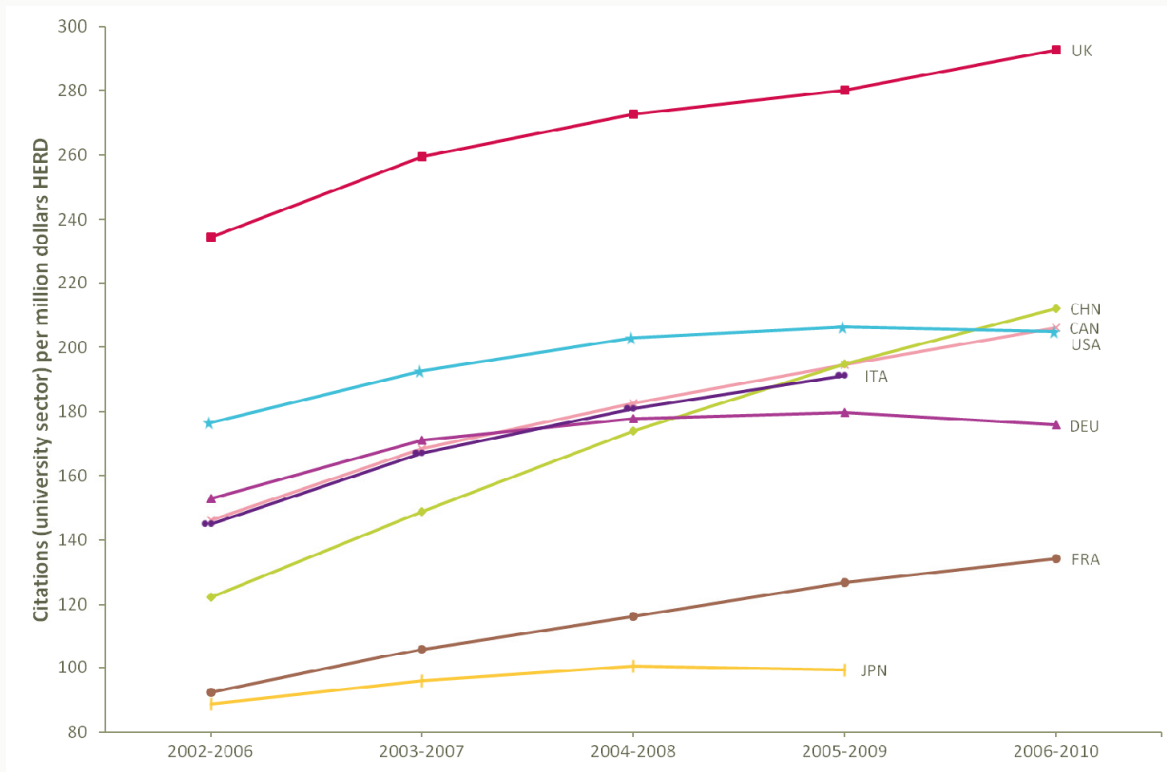


Source: Scopus and OECD MSTI

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	298.68	363.70	65.02	5.05%	-	-
EU-27	161.59	189.82	28.23	4.11%	5	5

EU27 rankings out of 16 (of 27) countries with available data

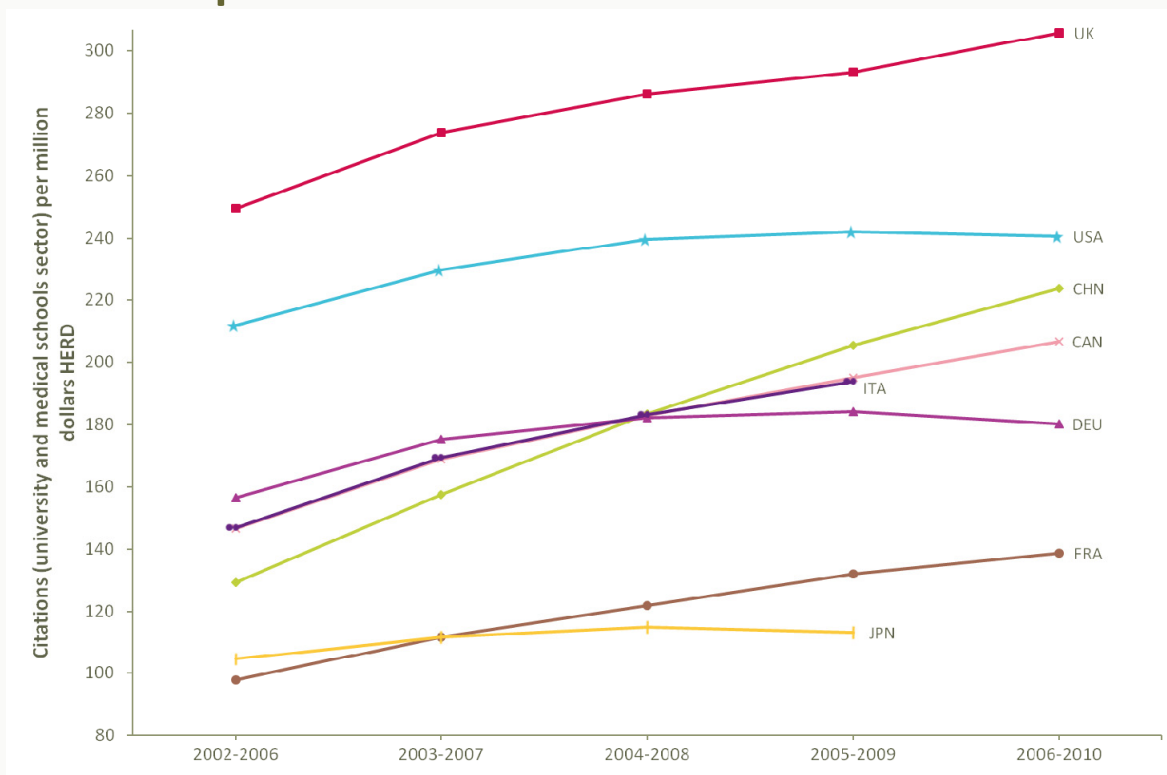
Citations (university sector) per million dollars HERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	234.51	292.52	58.02	5.68%	-	-
EU-27	135.14	162.31	27.17	4.69%	2	1

EU27 rankings out of 16 (of 27) countries with available data

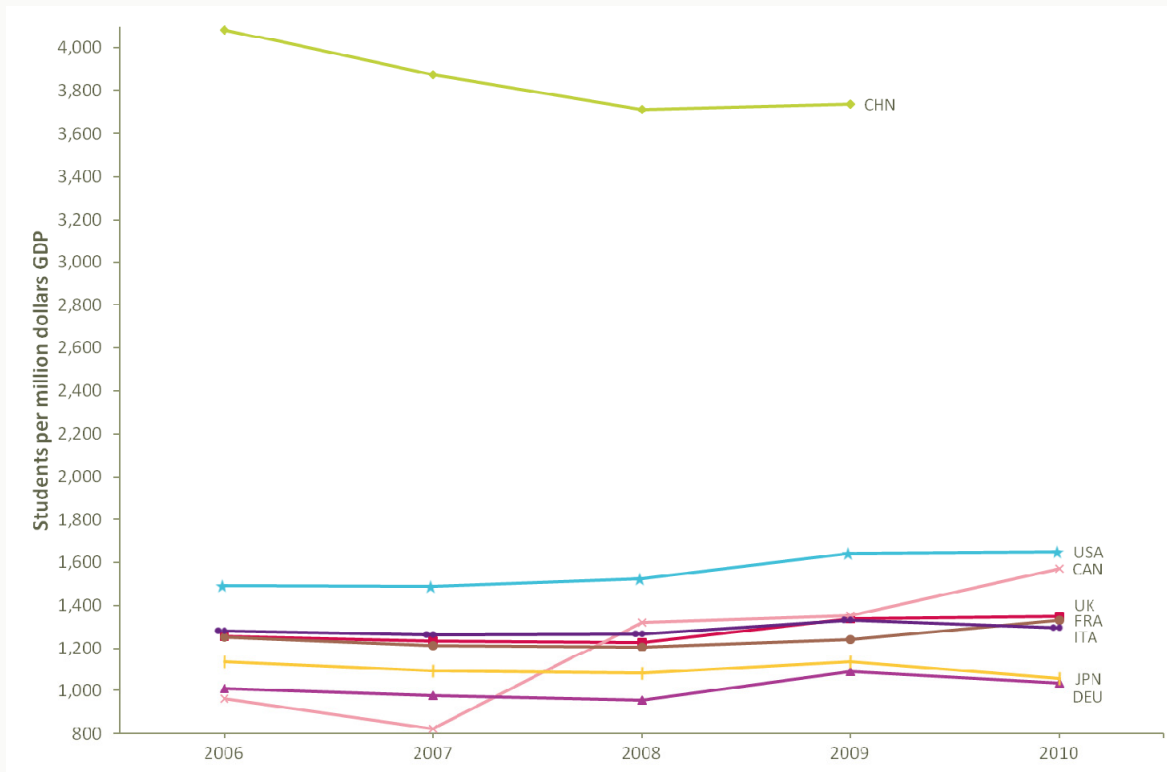
Citations (university and medical schools sector) per million dollars HERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	249.70	305.88	56.18	5.20%	-	-
EU-27	144.85	173.37	28.52	4.60%	2	1

EU27 rankings out of 16 (of 27) countries with available data

Students per million dollars GDP - UK and comparator countries

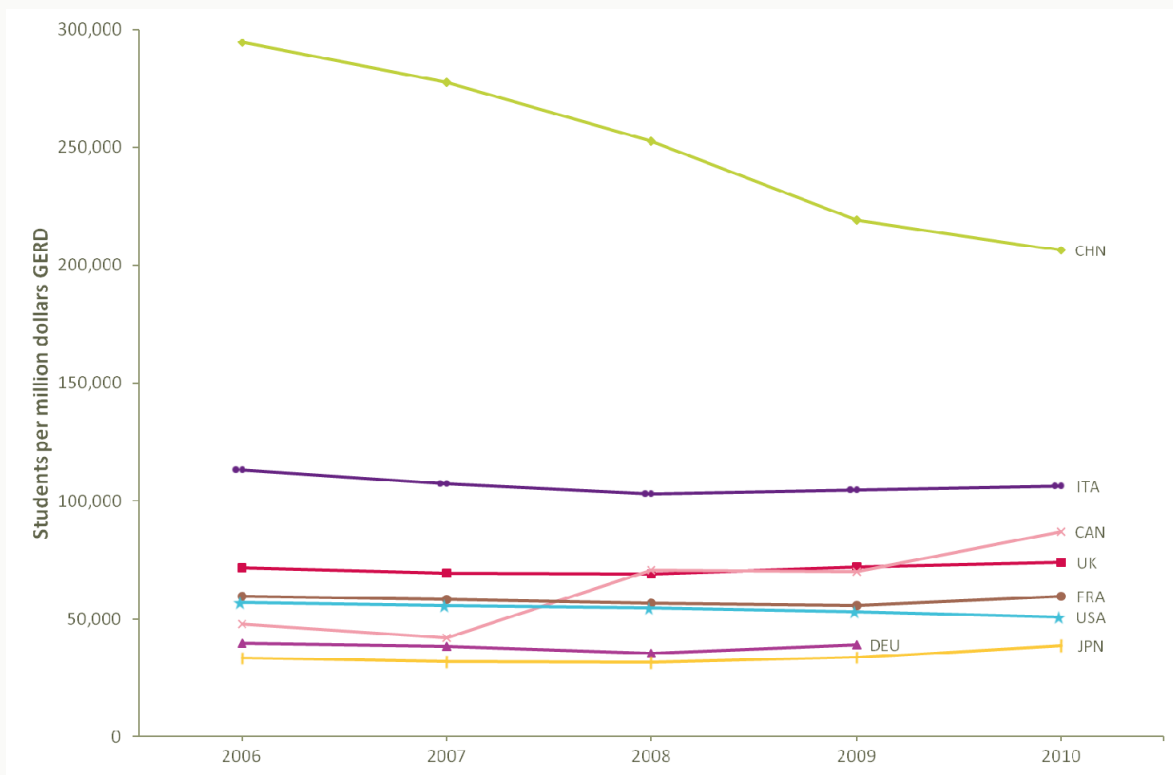


Source: OECD Education and OECD MSTI

	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	1,255.85	1,349.66	93.81	1.82%	-	-
G8	1,605.18	1,725.37	120.19	1.82%	4	4
EU-27	1,417.14	1,447.14	29.99	0.52%	14	12
OECD	1,533.50	1,558.17	24.67	0.40%	24	22

G8 rankings out of 8 (of 8) countries with available data
 EU27 rankings out of 20 (of 27) countries with available data
 OECD rankings out of 34 (of 42) countries with available data

Students per million dollars GERD - UK and comparator countries

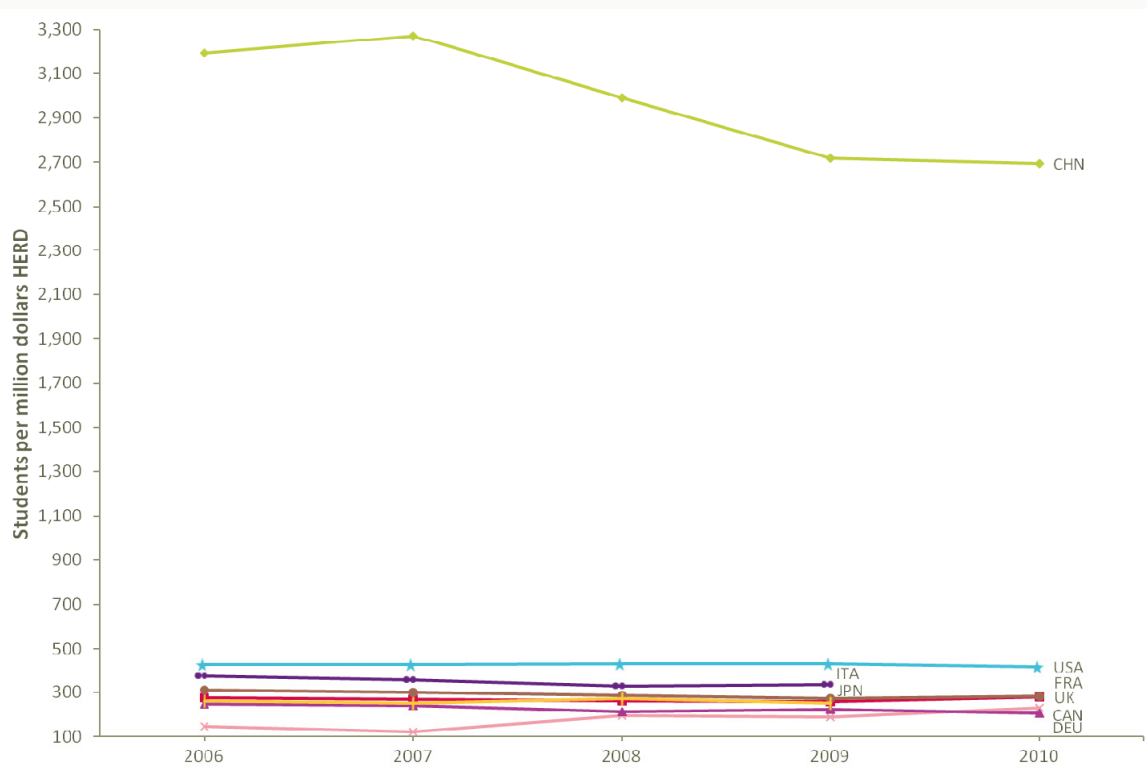


	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	71,897	73,981	2,084	0.72%	-	-
G8	69,443	68,208	-1,235	-0.45%	3	4
EU-27	79,397	76,543	-2,853	-0.91%	12	11
OECD	68,247	57,897	-10,350	-4.03%	19	16

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 19 (of 27) countries with available data
 OECD rankings out of 32 (of 42) countries with available data

Source: OECD Education and OECD MSTI

Students per million dollars HERD - UK and comparator countries

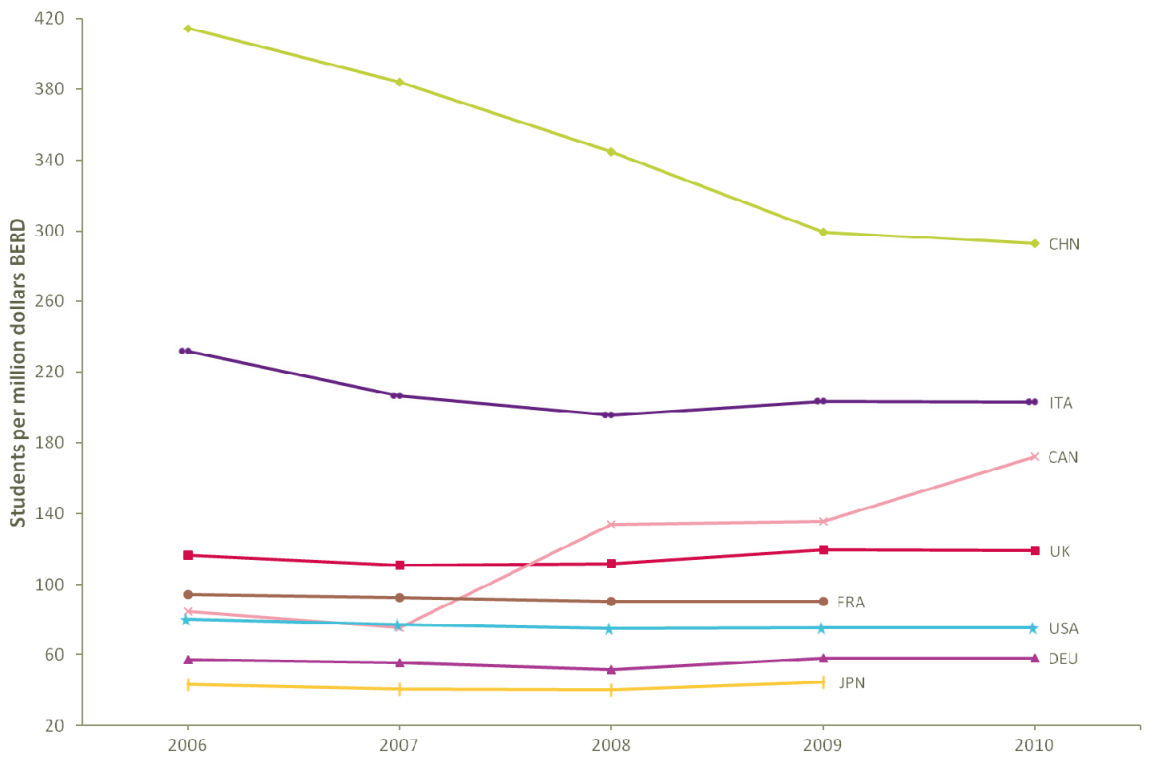


	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	275.22	279.20	3.98	0.36%	-	-
G8	466.92	450.34	-16.57	-0.90%	4	4
EU-27	354.08	298.02	-56.06	-4.22%	11	9
OECD	399.51	382.91	-16.60	-1.06%	21	18

G8 rankings out of 6 (of 8) countries with available data
 EU27 rankings out of 16 (of 27) countries with available data
 OECD rankings out of 29 (of 42) countries with available data

Source: OECD Education and OECD MSTI

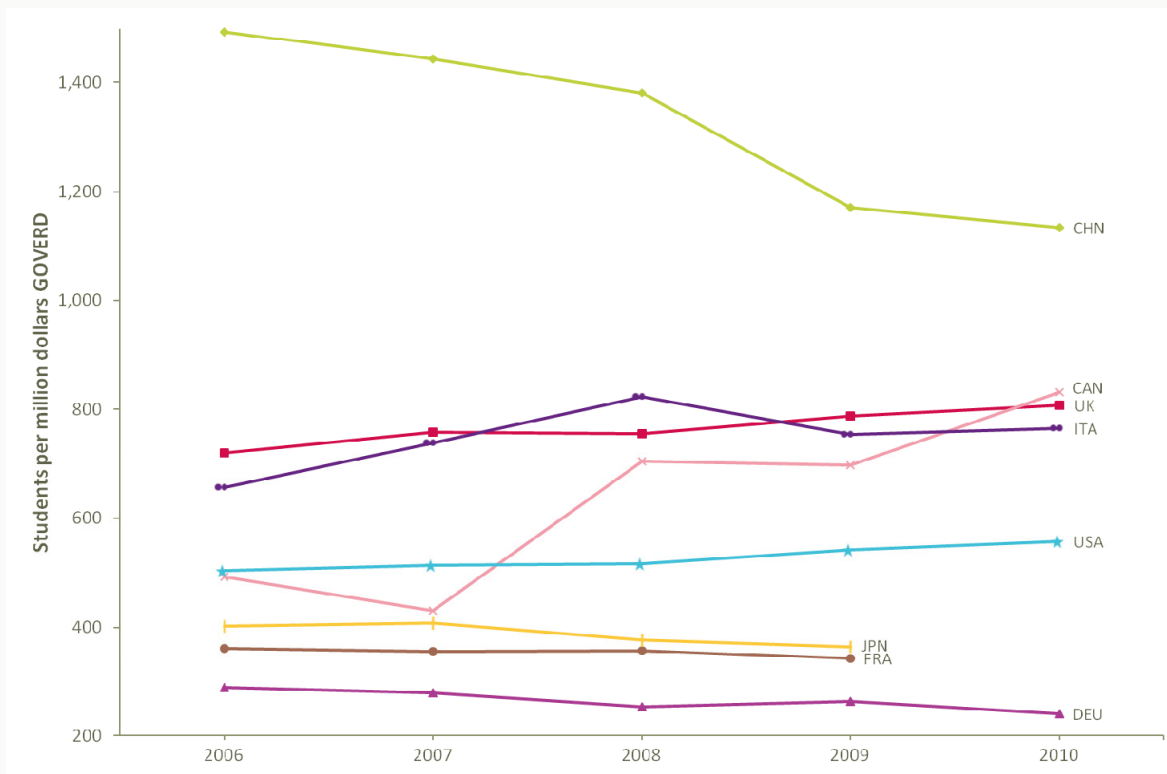
Students per million dollars BERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	116.61	119.33	2.72	0.58%	-	-

Source: OECD Education and OECD MSTI

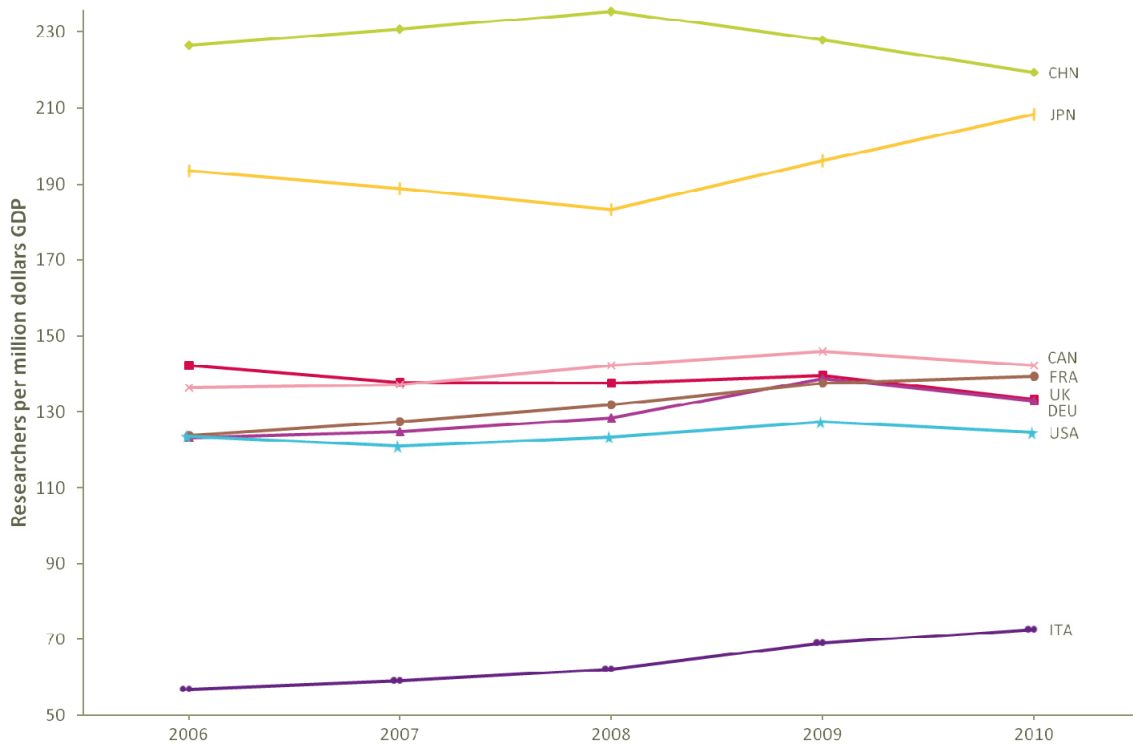
Students per million dollars GOVERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	719.53	808.29	88.76	2.95%	-	-
OECD	599.00	586.77	-12.23	-0.51%	13	13

OECD rankings out of 21 (of 42) countries with available data

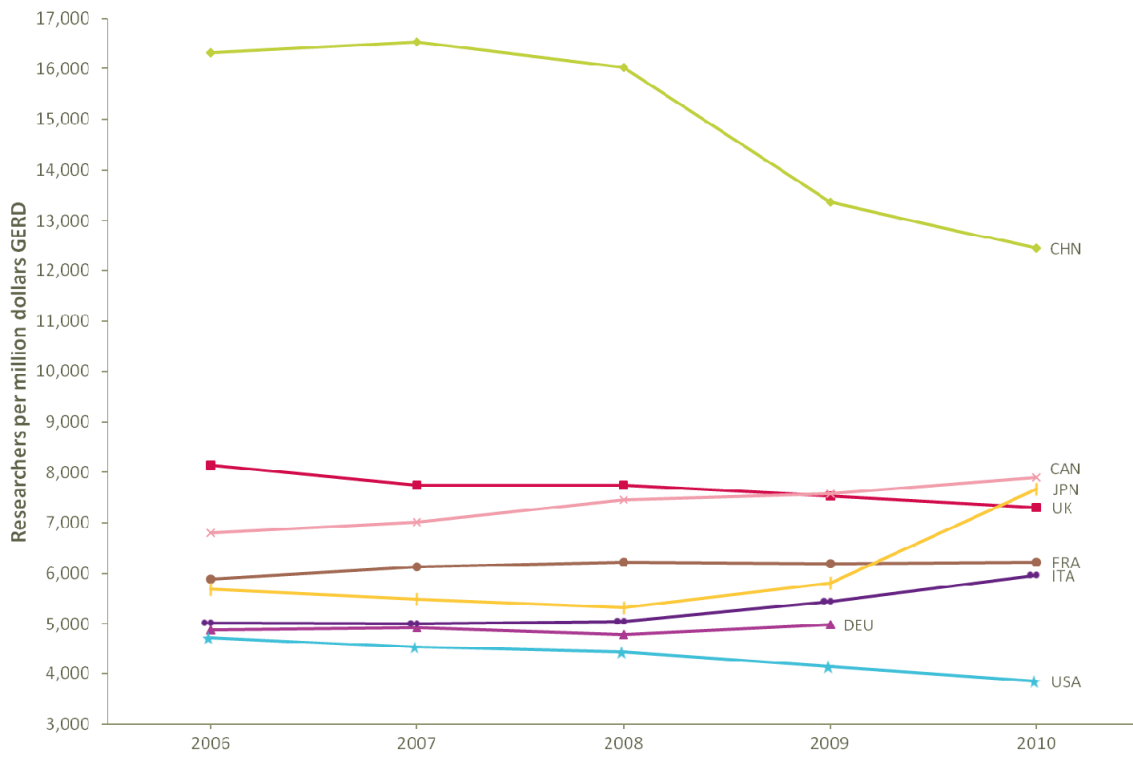
Researchers per million dollars GDP - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	142.29	133.40	-8.89	-1.60%	-	-
G8	142.79	145.82	3.03	0.53%	3	5
EU-27	118.65	131.34	12.69	2.57%	5	11
OECD	127.54	137.45	9.92	1.89%	11	19

G8 rankings out of 8 (of 8) countries with available data
 EU27 rankings out of 18 (of 27) countries with available data
 OECD rankings out of 30 (of 42) countries with available data

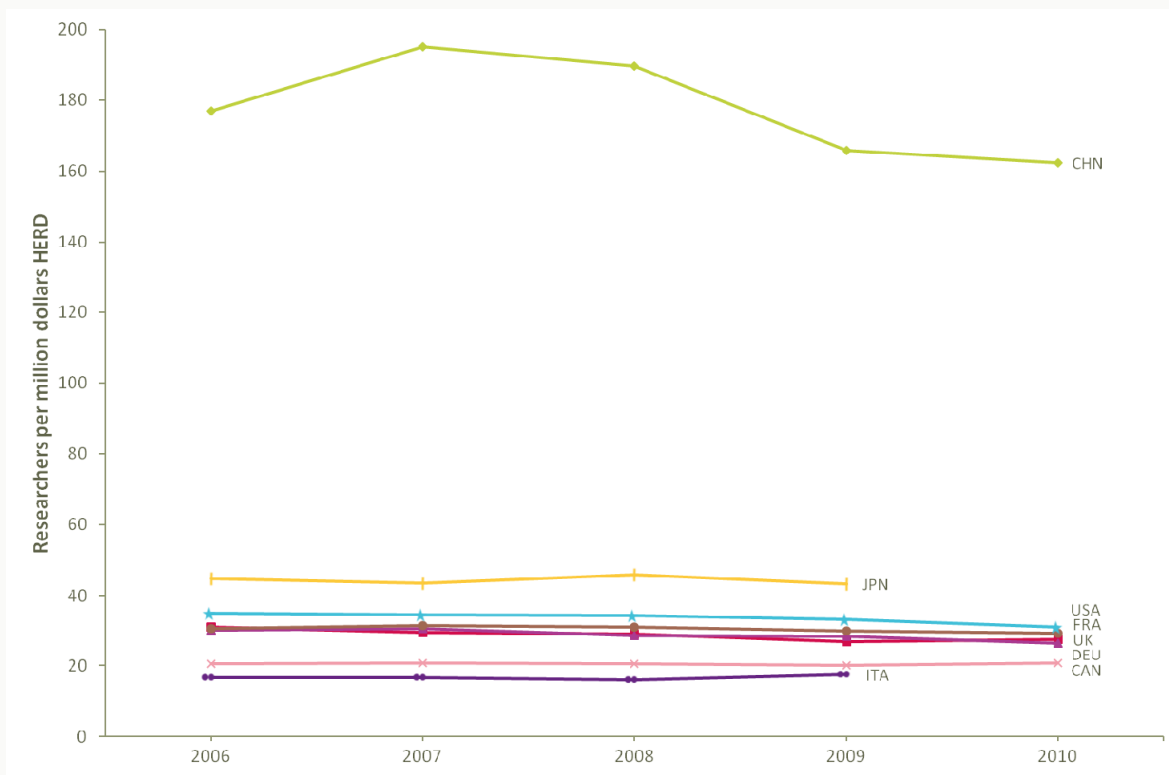
Researchers per million dollars GERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	8,146	7,312	-834	-2.66%	-	-
G8	6,555	6,103	-452	-1.77%	2	4
EU-27	6,648	6,947	299	1.11%	9	10
OECD	5,676	5,107	-569	-2.60%	13	17

G8 rankings out of 7 (of 8) countries with available data
 EU27 rankings out of 17 (of 27) countries with available data
 OECD rankings out of 28 (of 42) countries with available data

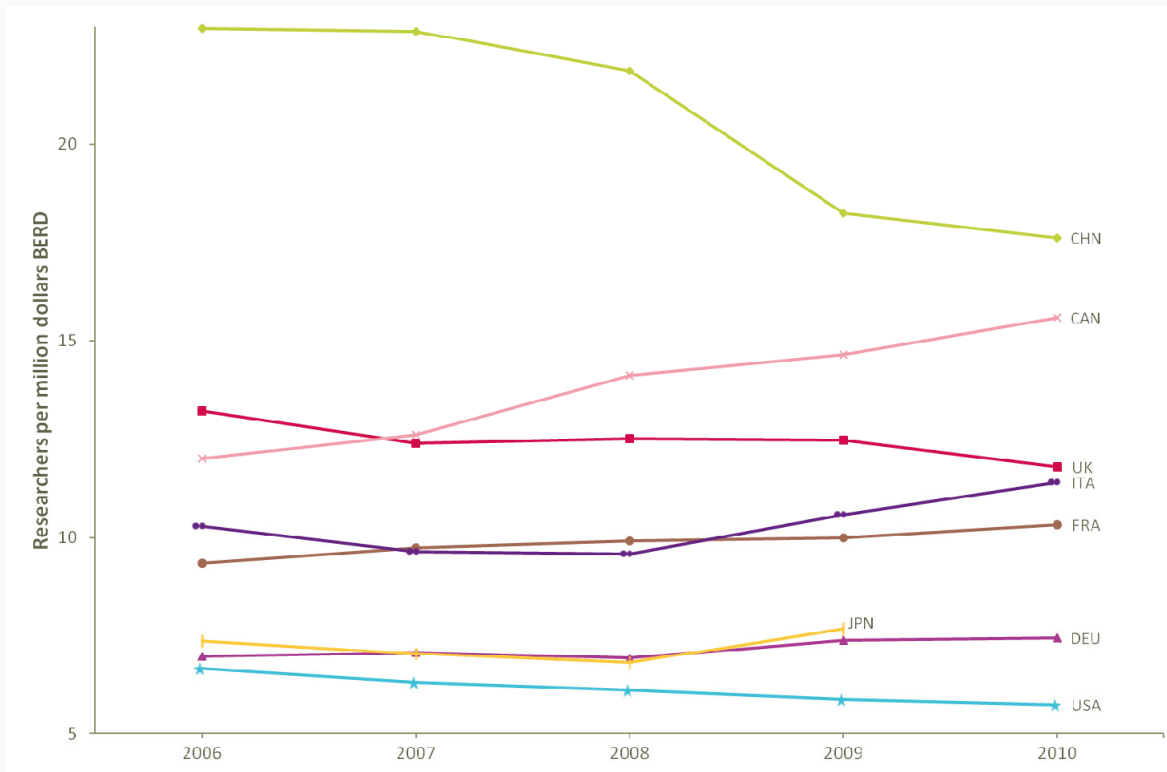
Researchers per million dollars HERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	31.18	27.60	-3.59	-3.01%	-	-
G8	48.92	43.73	-5.18	-2.76%	3	4
EU-27	29.65	27.05	-2.60	-2.27%	7	8
OECD	33.23	33.78	0.55	0.41%	12	13

G8 rankings out of 6 (of 8) countries with available data
 EU27 rankings out of 14 (of 27) countries with available data
 OECD rankings out of 24 (of 42) countries with available data

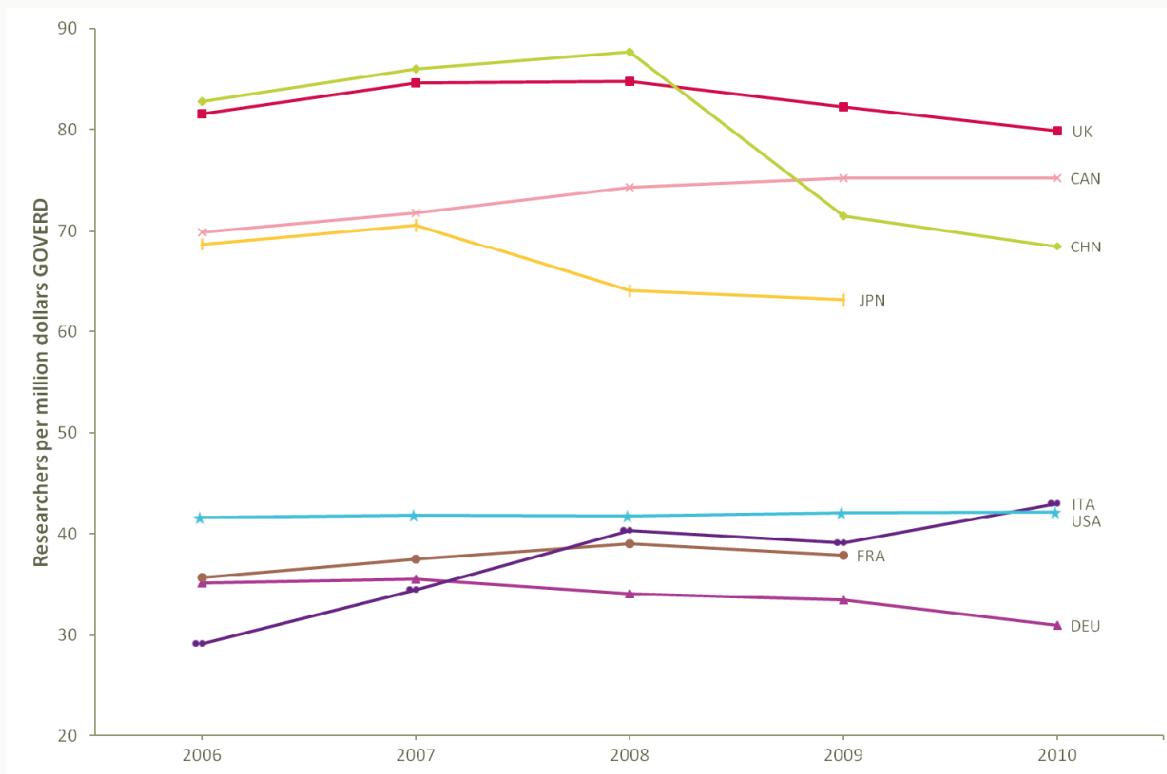
Researchers per million dollars BERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	13.21	11.79	-1.42	-2.80%	-	-
EU-27	10.57	11.50	0.93	2.13%	6	7

EU27 rankings out of 16 (of 27) countries with available data

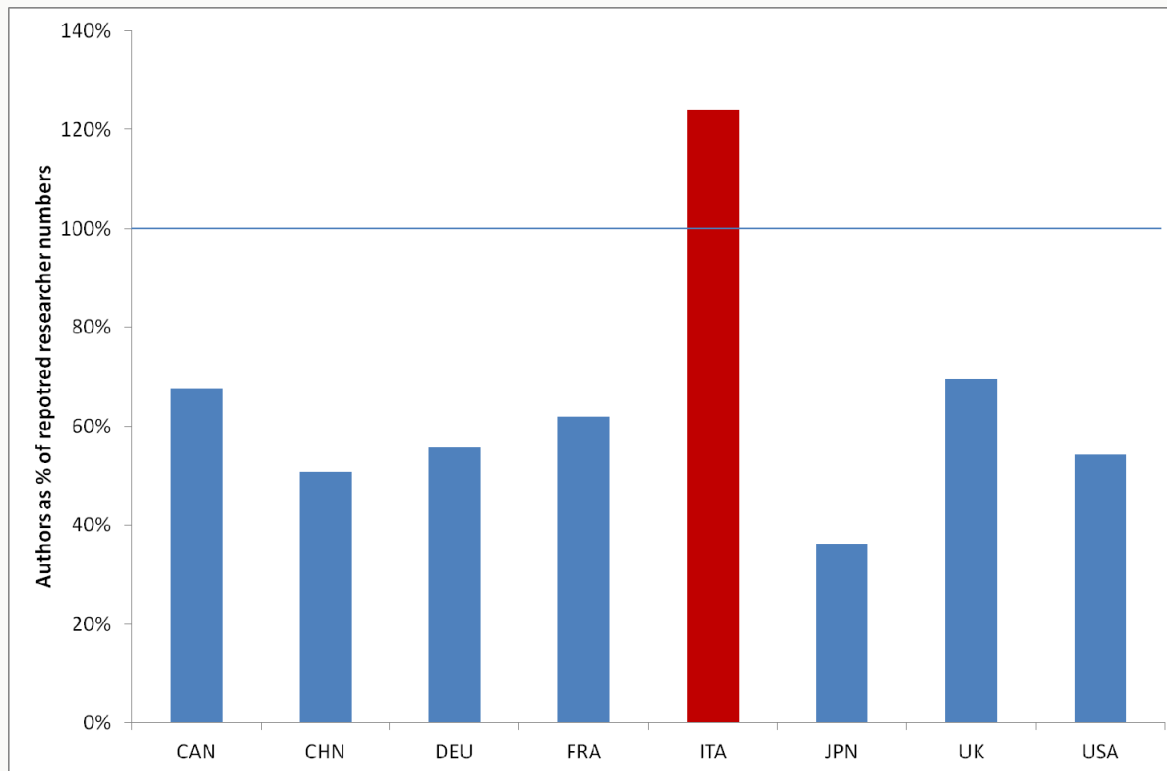
Researchers per million dollars GOVERD - UK and comparator countries



	2006	2010	Change 06-10	CAGR 06-10	UK Rank 2006	UK Rank 2010
UK	81.52	79.89	-1.63	-0.50%	-	-
EU-27	49.16	49.61	0.45	0.23%	6	6

EU27 rankings out of 14 (of 27) countries with available data

Background on articles per researcher - UK and comparator countries



Source: Scopus and OECD MSTI

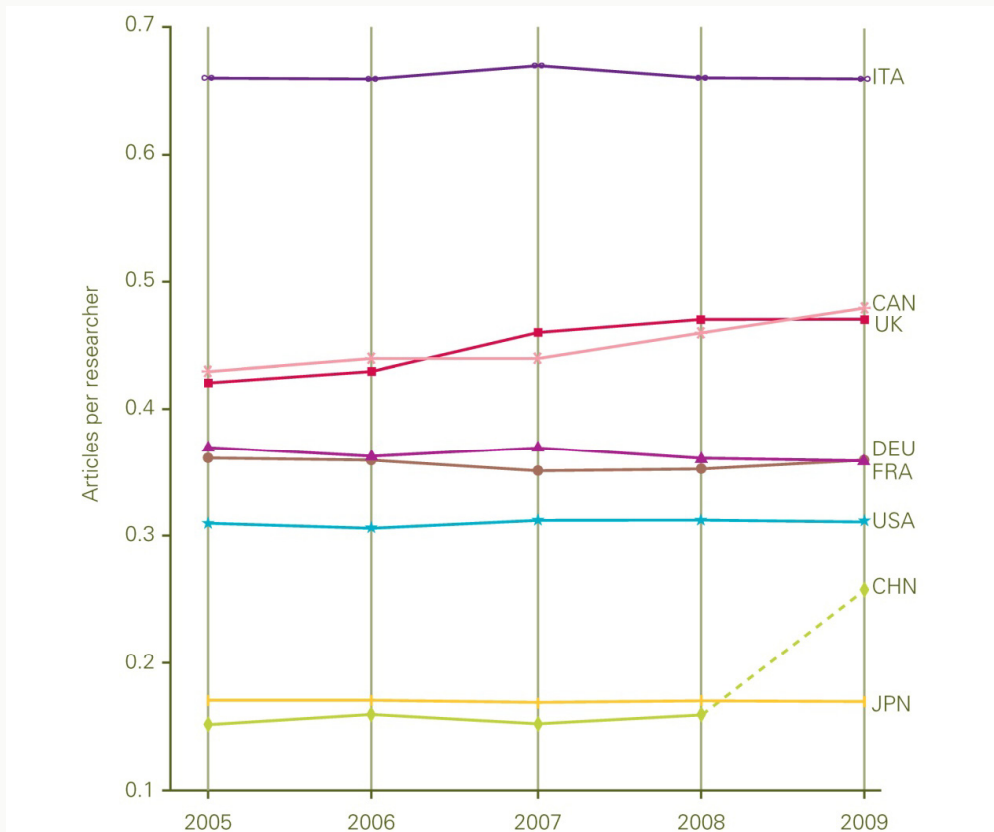
This chart shows the count of unique authors in 2009 (source: Scopus) as a proportion of the count of researchers in 2009 (source: OECD MSTI).

Not all researchers publish articles (e.g. those in corporate organisations are less likely to publish) and of those that do publish, not all will publish every year. It is therefore to be expected that the number of authors in any given year will be less than the total population of researchers, and so the proportion of authors to researchers will be less than 100%.

However, Italy is the only country in the comparator group for which the number of authors exceeds the number of reported researchers, giving a value of greater than 100%. This suggests that the number of researchers reported for Italy may be either underestimated or were determined on a basis that is not consistent with that for the other countries in the comparator group.

Caution is therefore required in assessing the relative performance of Italy on the number of researchers as well as productivity measures that show outputs (articles and citations) per researcher, as the latter are likely to be inflated.

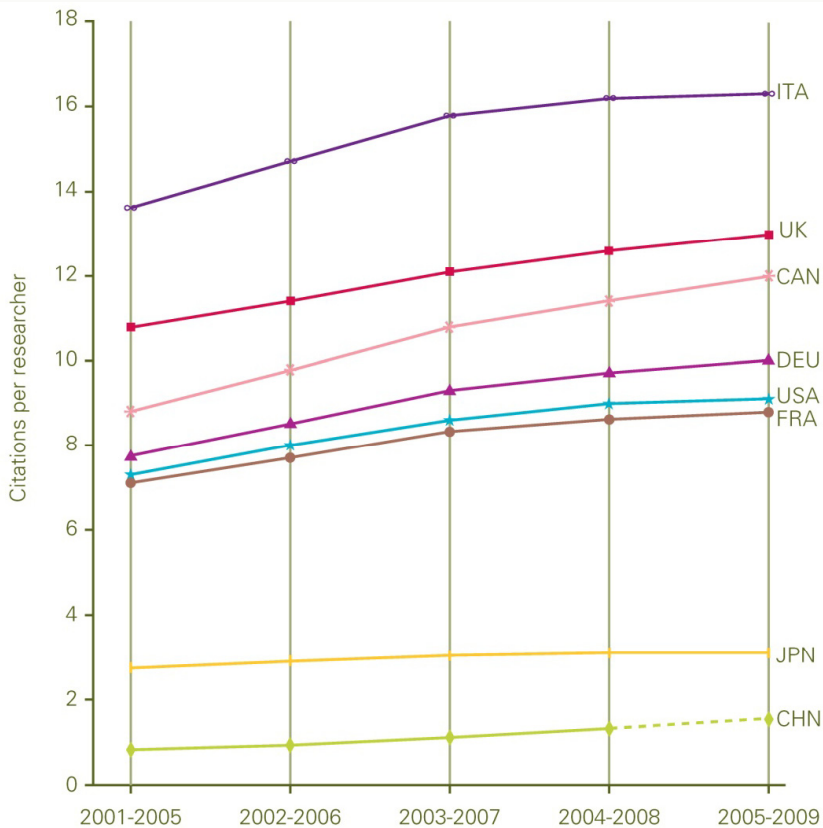
Articles per researcher - UK and comparator countries



	2005	2009	Change 05-09	CAGR 05-09	UK Rank 2005	UK Rank 2009
UK	0.42	0.47	0.05	2.80%	-	-
G8	0.25	0.26	0.01	1.01%	3	3
EU27	0.35	0.37	0.02	1.19%	8	9
OECD	0.24	0.28	0.04	3.80%	12	12
World	0.28	0.31	0.04	3.13%	12	13

Source: Scopus and OECD MSTI

Citations per researcher - UK and comparator countries



Source: Scopus and OECD MSTI

	2005	2009	Change 05-09	CAGR 05-09	UK Rank 2005	UK Rank 2009
UK	10.81	13.04	2.23	4.79%	-	-
G8	5.13	6.25	1.12	5.06%	3	3
EU27	6.88	8.23	1.35	4.57%	4	7
OECD	4.21	4.95	0.74	4.15%	5	8
World	4.31	5.05	0.74	4.03%	5	8

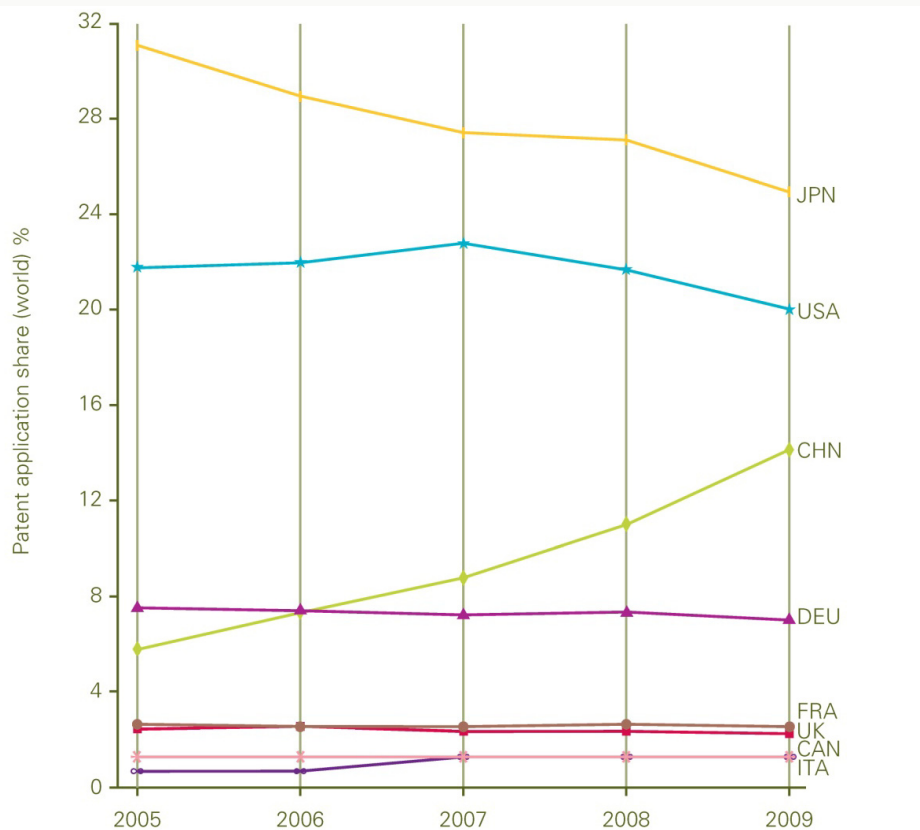
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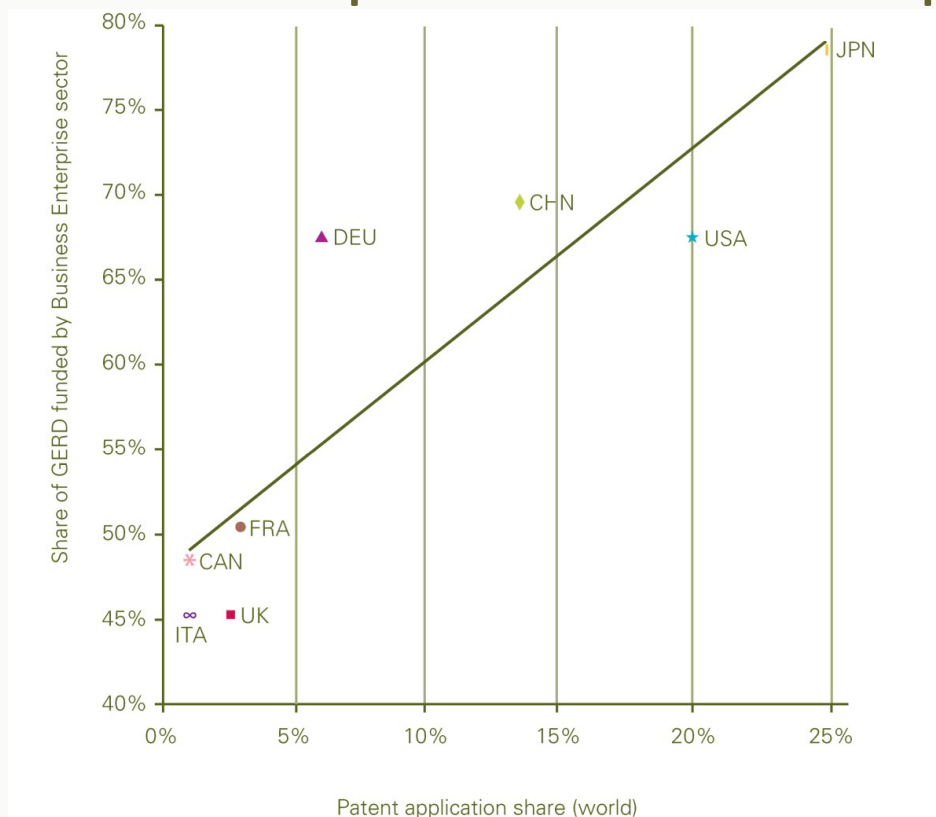
Patent application share (world) – UK and comparator countries



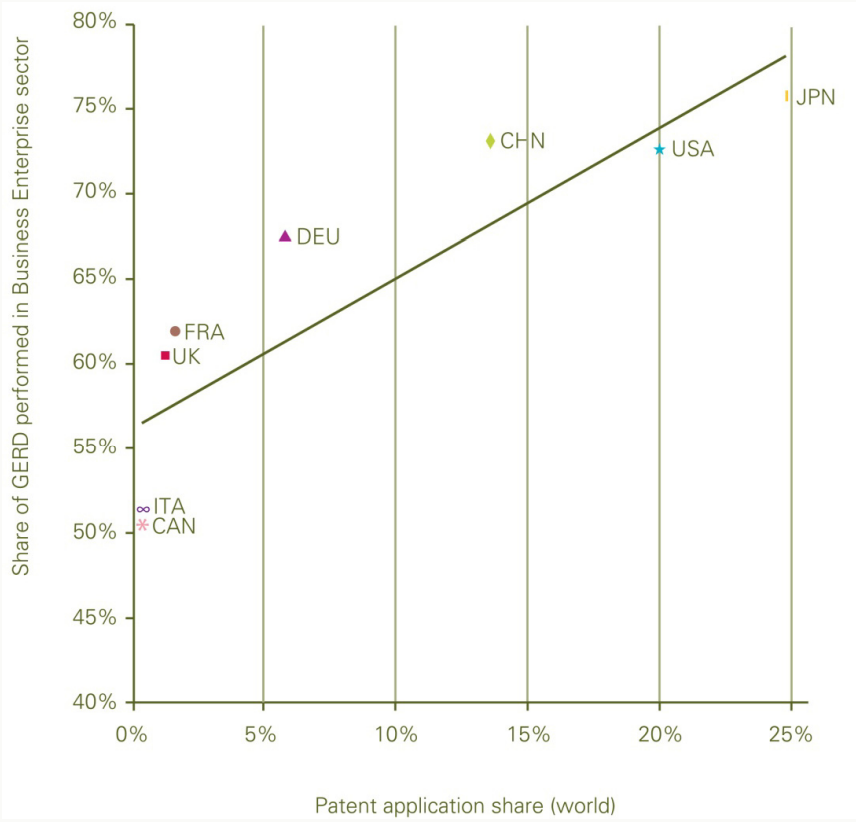
Source: WIPO Statistics Database

	2005	2009	Change 05-09	CAGR 05-09	UK Rank 2005	UK Rank 2009
UK	2.40%	2.21%	-0.19%	-2.04%	-	-
G8	68.74%	60.45%	-8.29%	-3.16%	5	5
EU27	18.40%	17.65%	-0.75%	-1.04%	3	3
OECD	92.92%	91.96%	-0.96%	-0.26%	7	7
World	100%	100%	0.00%	0.00%	7	7

Patent application share (world) versus share of GERD funded by Business Enterprise sector – UK and comparator countries



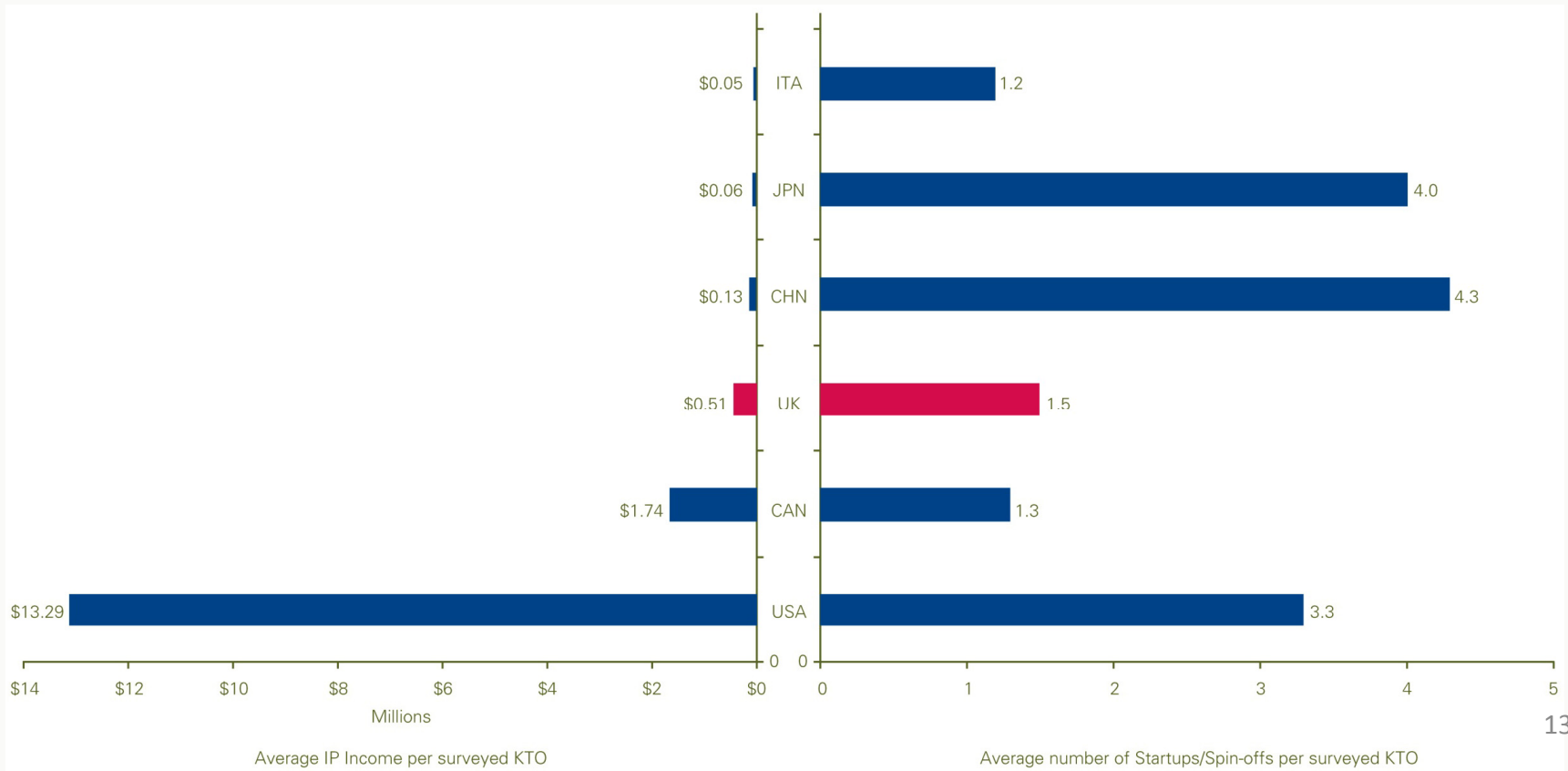
Patent application share (world) versus share of BERD – UK and comparator countries



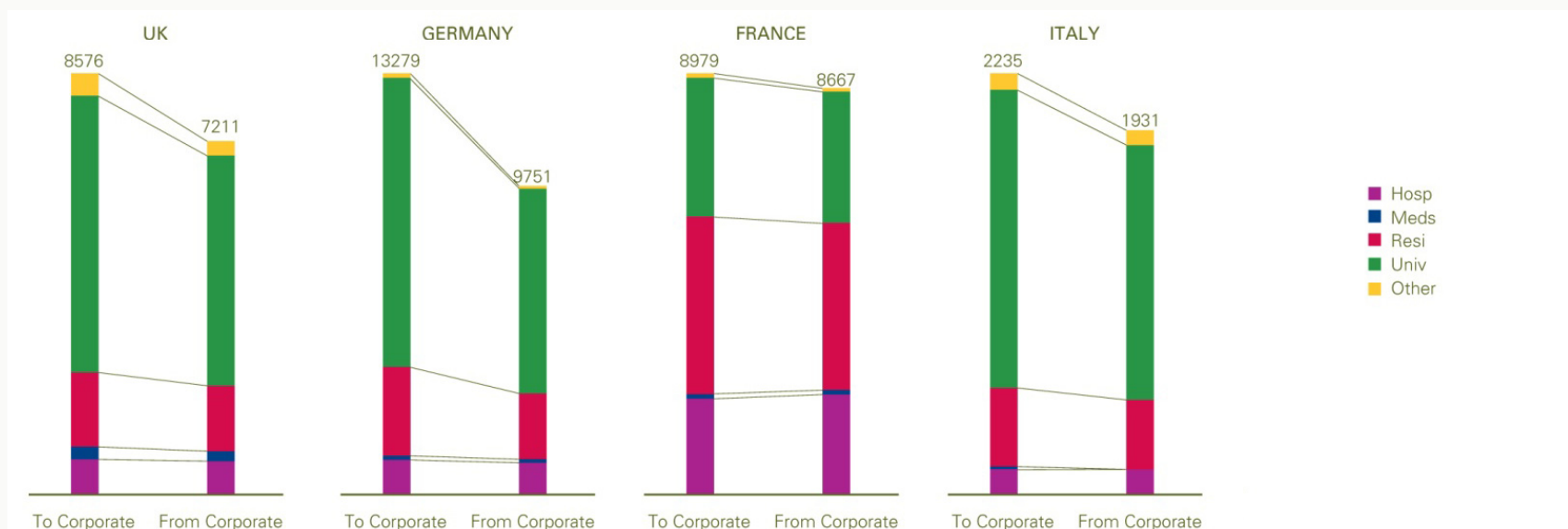
Source: WIPO Statistics Database and OECD MSTI

IP income and startups/spin-offs per surveyed Knowledge Transfer Office (KTO)

Source: AUTM Licensing Activity Survey and ProTon Europe Annual Survey Reports

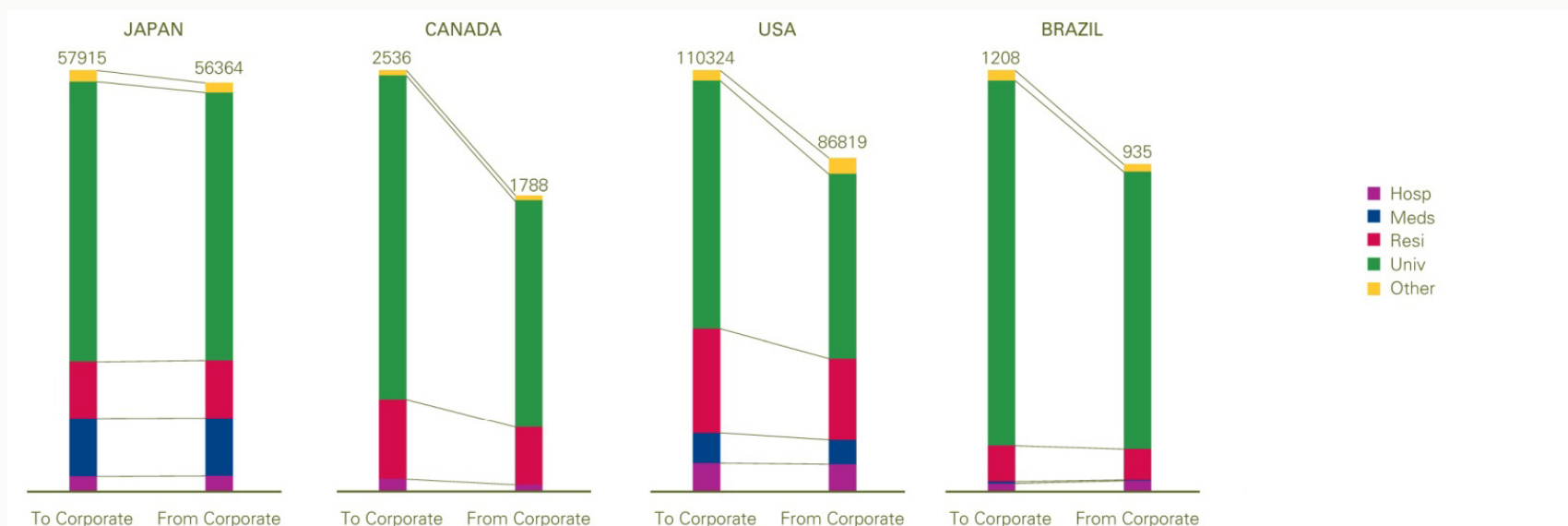


Cross-sector migration of researchers I – UK and comparator countries



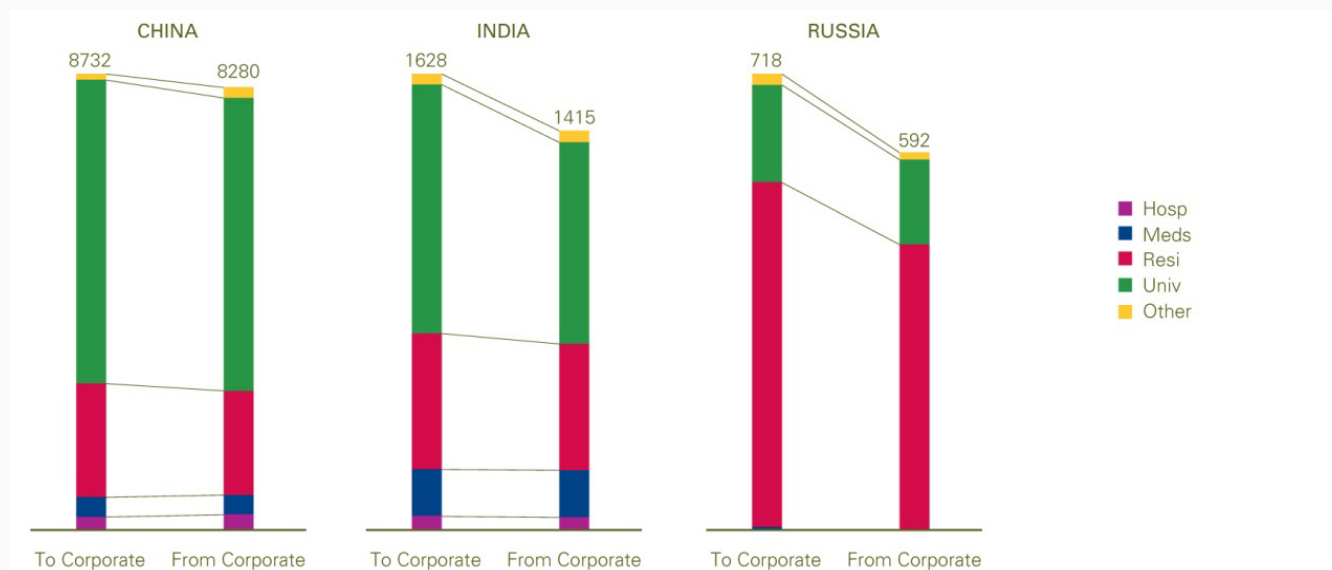
Univ (university): degree-granting institutes that also engage in research
Hosp (hospital): organisations that provide healthcare and that may also engage in research
Resi (research institute): organisations that engage in research and that may also conduct educational activities
Meds (medical school): medical degree-granting institutes that also engage in research
Other: Comp (companies) corporate sector that engages in research; **Govt** government organisations that engage in research such as the Rutherford Appleton laboratory; **Ngov** non-governmental organisations that engage in research such as NIESR

Cross-sector migration of researchers II – UK and comparator countries



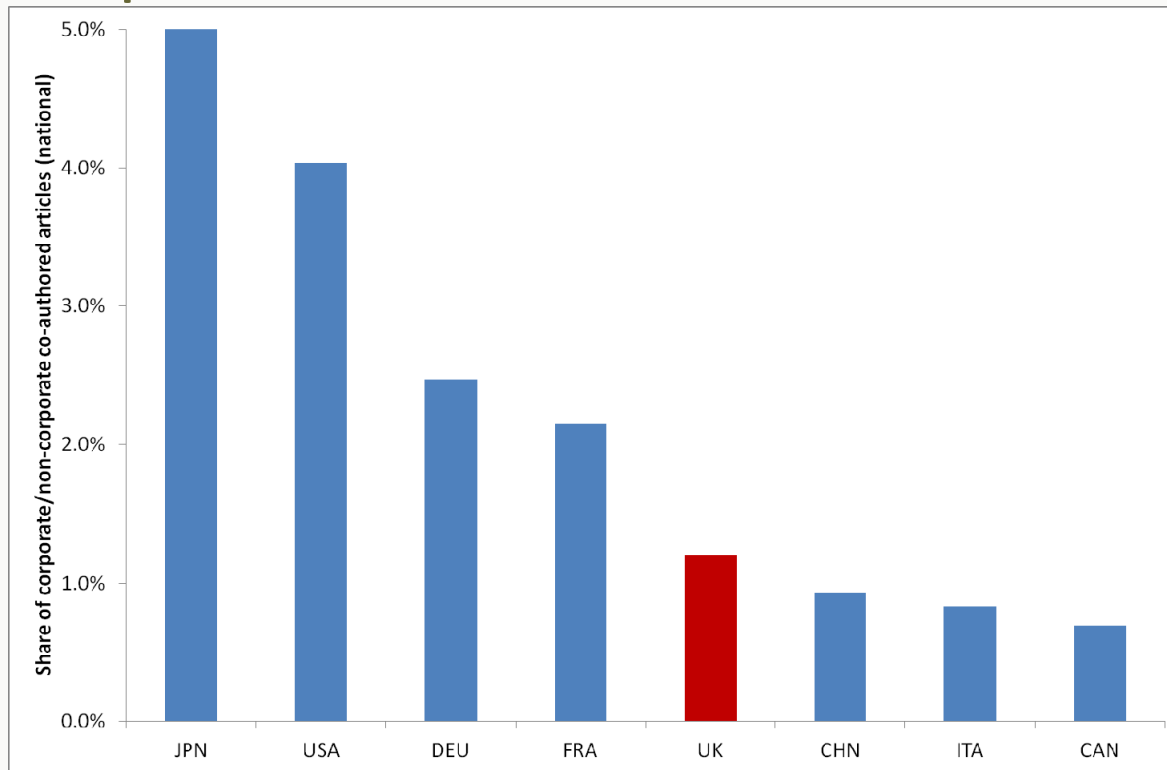
Univ (university): degree-granting institutes that also engage in research
Hosp (hospital): organisations that provide healthcare and that may also engage in research
Resi (research institute): organisations that engage in research and that may also conduct educational activities
Meds (medical school): medical degree-granting institutes that also engage in research
Other: Comp (companies) corporate sector that engages in research; **Govt** government organisations that engage in research such as the Rutherford Appleton laboratory; **Ngov** non-governmental organisations that engage in research such as NIESR

Cross-sector migration of researchers III – UK and comparator countries



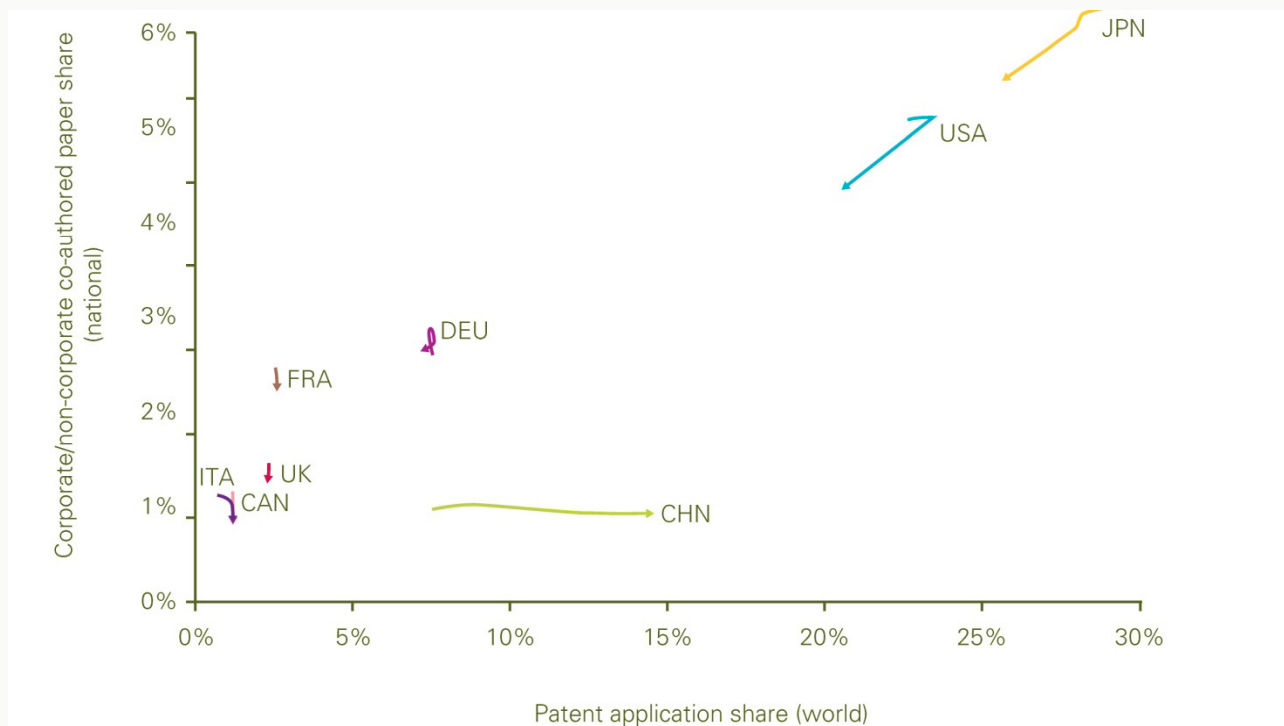
Univ (university): degree-granting institutes that also engage in research
Hosp (hospital): organisations that provide healthcare and that may also engage in research
Resi (research institute): organisations that engage in research and that may also conduct educational activities
Meds (medical school): medical degree-granting institutes that also engage in research
Other: **Comp** (companies) corporate sector that engages in research; **Govt** government organisations that engage in research such as the Rutherford Appleton laboratory; **Ngov** non-governmental organisations that engage in research such as NIESR

Share of corporate/non-corporate co-authored articles (national) – UK and comparator countries

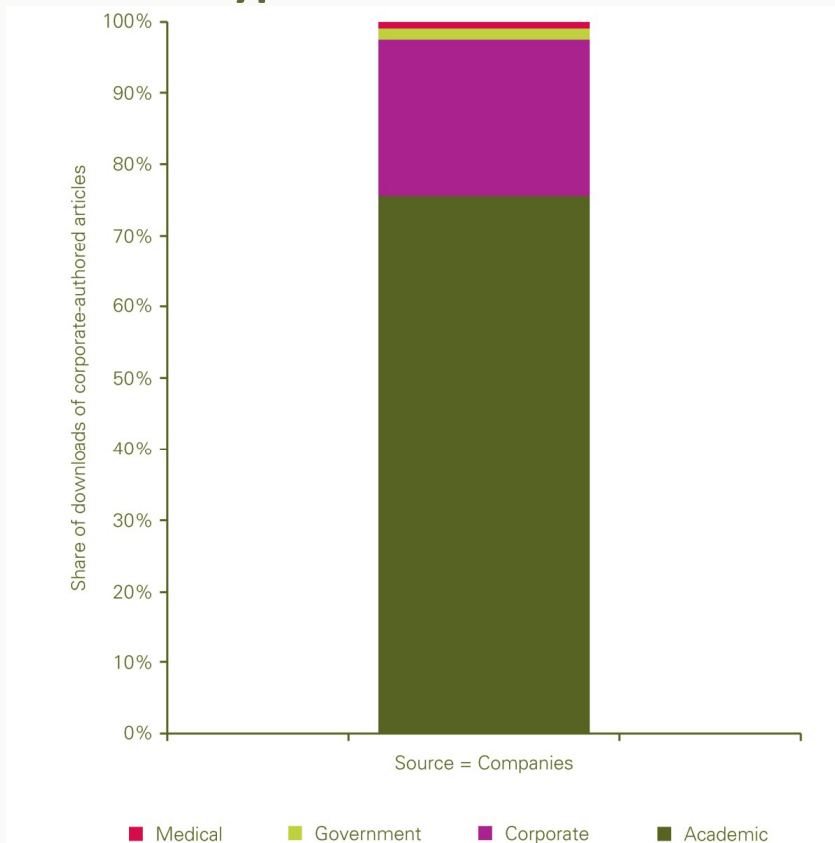


Source: Scopus

Patent application share (world) versus share of corporate/non-corporate co-authored articles (national) – UK and comparator countries

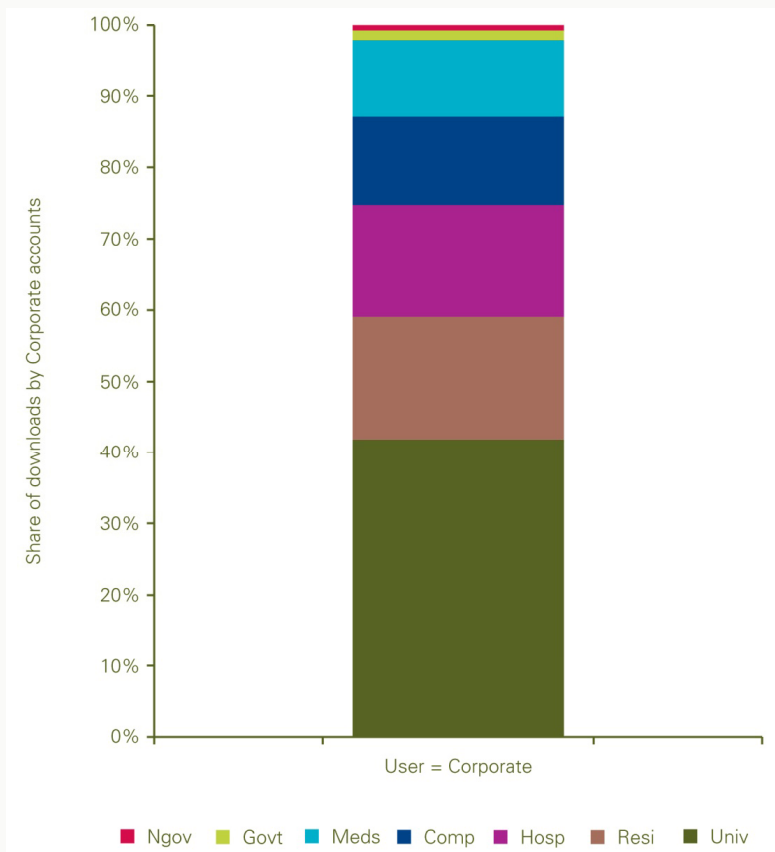


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Source: ScienceDirect

Univ (university): degree-granting institutes that also engage in research
Hosp (hospital): organisations that provide healthcare and that may also engage in research
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