



Prof. Sir David King

FRS, Chief Scientific Adviser
to HM Government

The background of the slide is the European Union flag, featuring a blue field with twelve yellow stars arranged in a circle. The flag is slightly blurred and has a wavy texture.

ERC: New Research Challenges and Opportunities

Sir David King

Chief Scientific Adviser to HM Government

ERC Launch, Berlin

27 February 2007

The European Research Council (ERC)

“Until now European added value has been collaboration between different countries. It is now time to bring a new definition of added value, one that incorporates the principle of allowing a researcher in any European state to compete with all other researchers on the basis of excellence”.

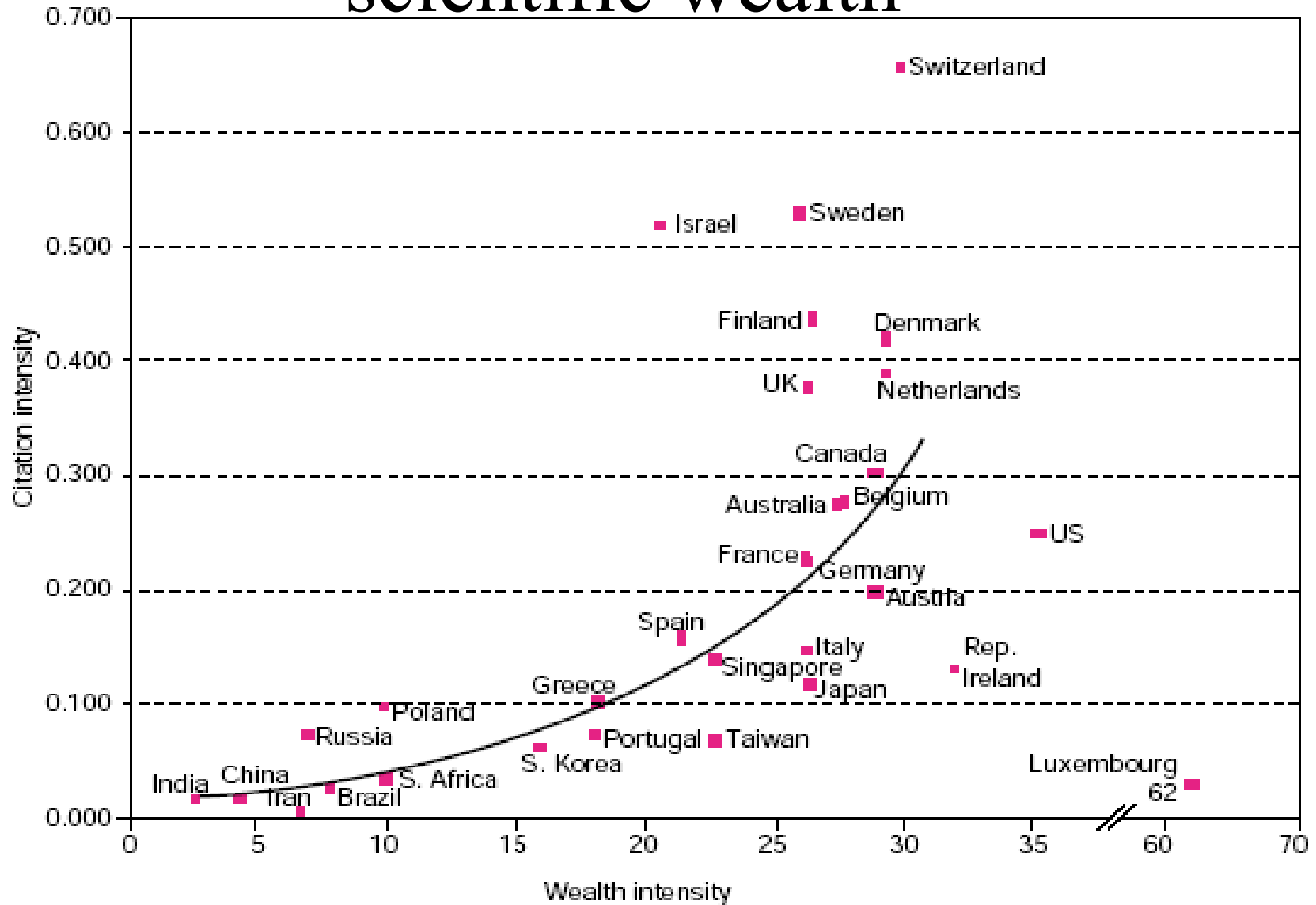
Science is increasingly global

International co-authorship (% total)

	UK	FR	DE
1992	20.5	27.1	25.1
1995	24.0	30.1	29.0
1998	31.3	35.8	41.7
2001	35.8	40.9	46.2
2003	39.2	43.7	43.0

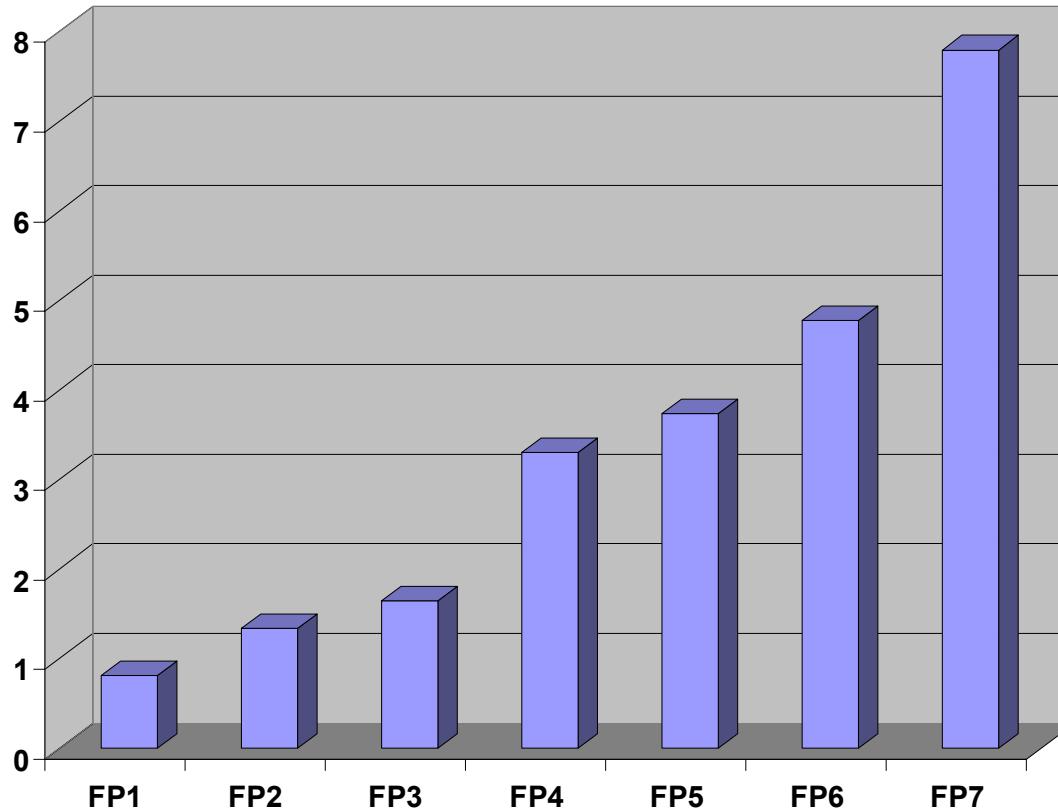
Source: Global Science and Innovation Forum, 2006

Comparing economic and scientific wealth



Source: D A King, Nature **430** (2004) 313 (15 July 2004)

The EU's FP budget

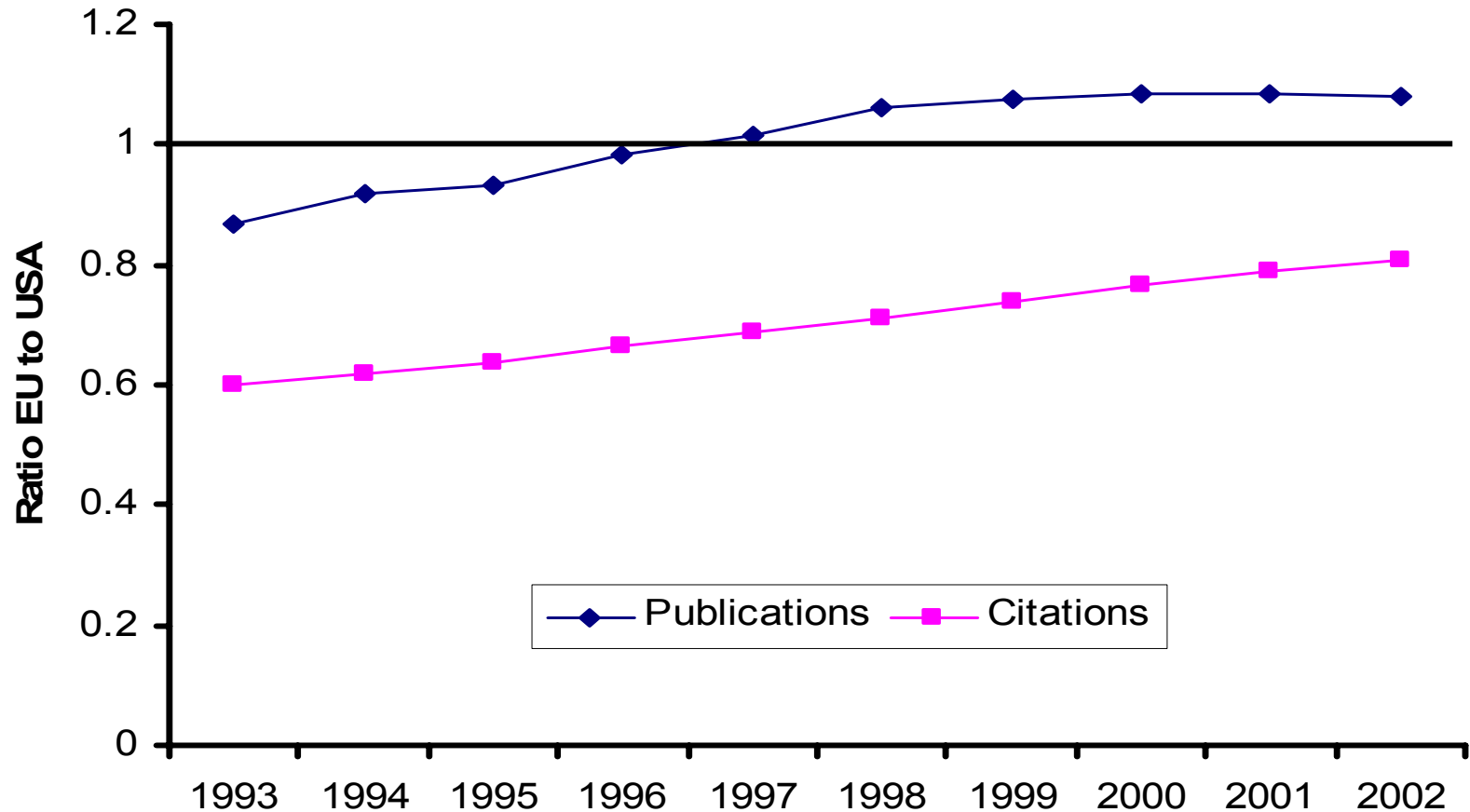


(average annual budget -
€bn)

World Science Citations

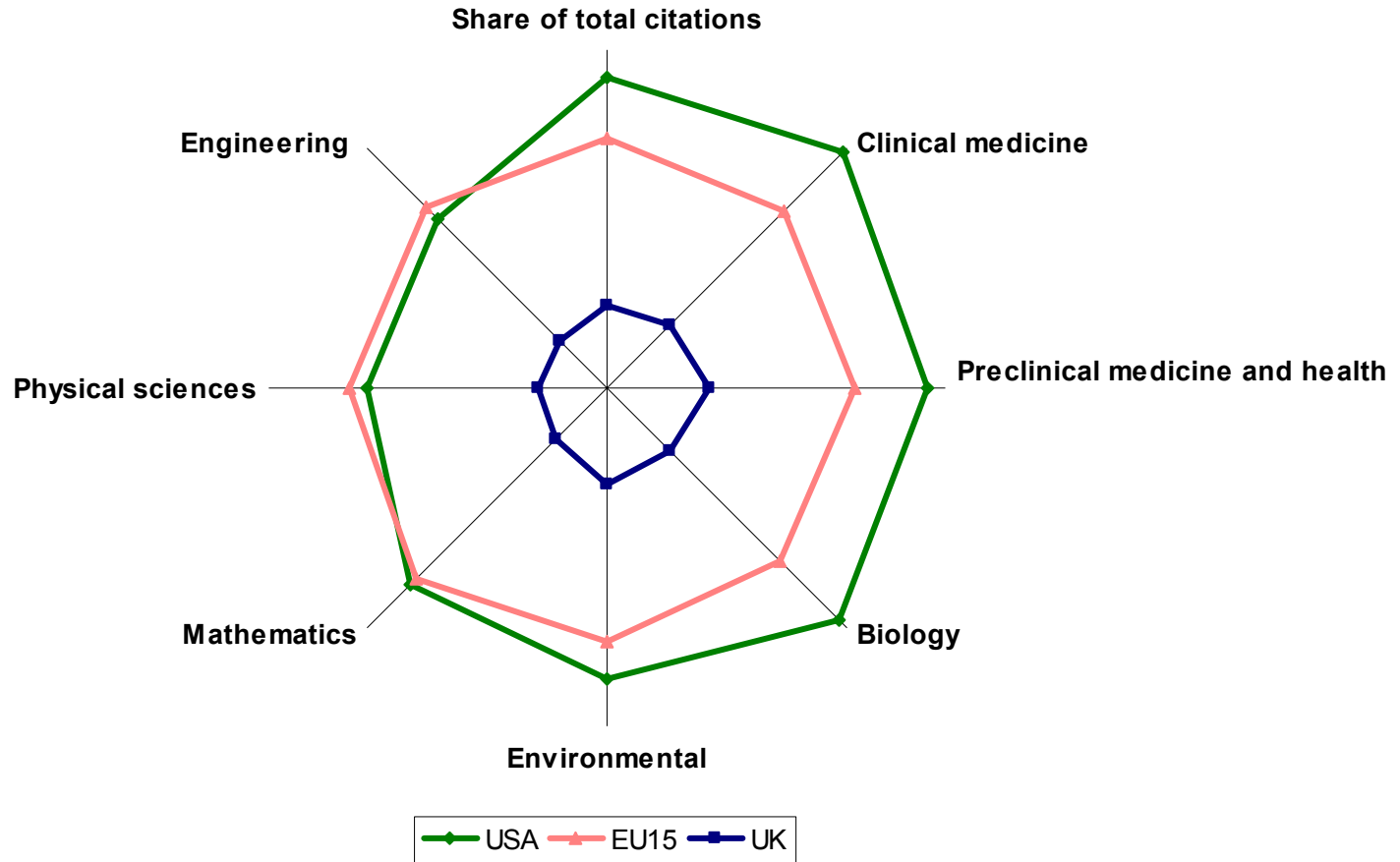
Country	% share of world publications		% share of world citations		Rank order
USA	34.9	↓	49.4	↓	1
EU15	37.1	↑	39.3	↑	
UK	9.4	↑	11.4	↑	2
GERMANY	8.8	↑	10.0	↑	3
JAPAN	9.3	↑	8.4	↑	4
FRANCE	6.4	↑	6.9	↑	5
CANADA	4.6	↓	5.3	↓	6
ITALY	4.1	↑	4.4	↑	7
CHINA	3.2	↑	1.6	↑	19
INDIA	2.1	↓	0.9	↑	22
SOUTH AFRICA	0.5	-	0.3	↑	29
IRAN	0.13	↑	0.06	↑	30

Comparing Europe with the US



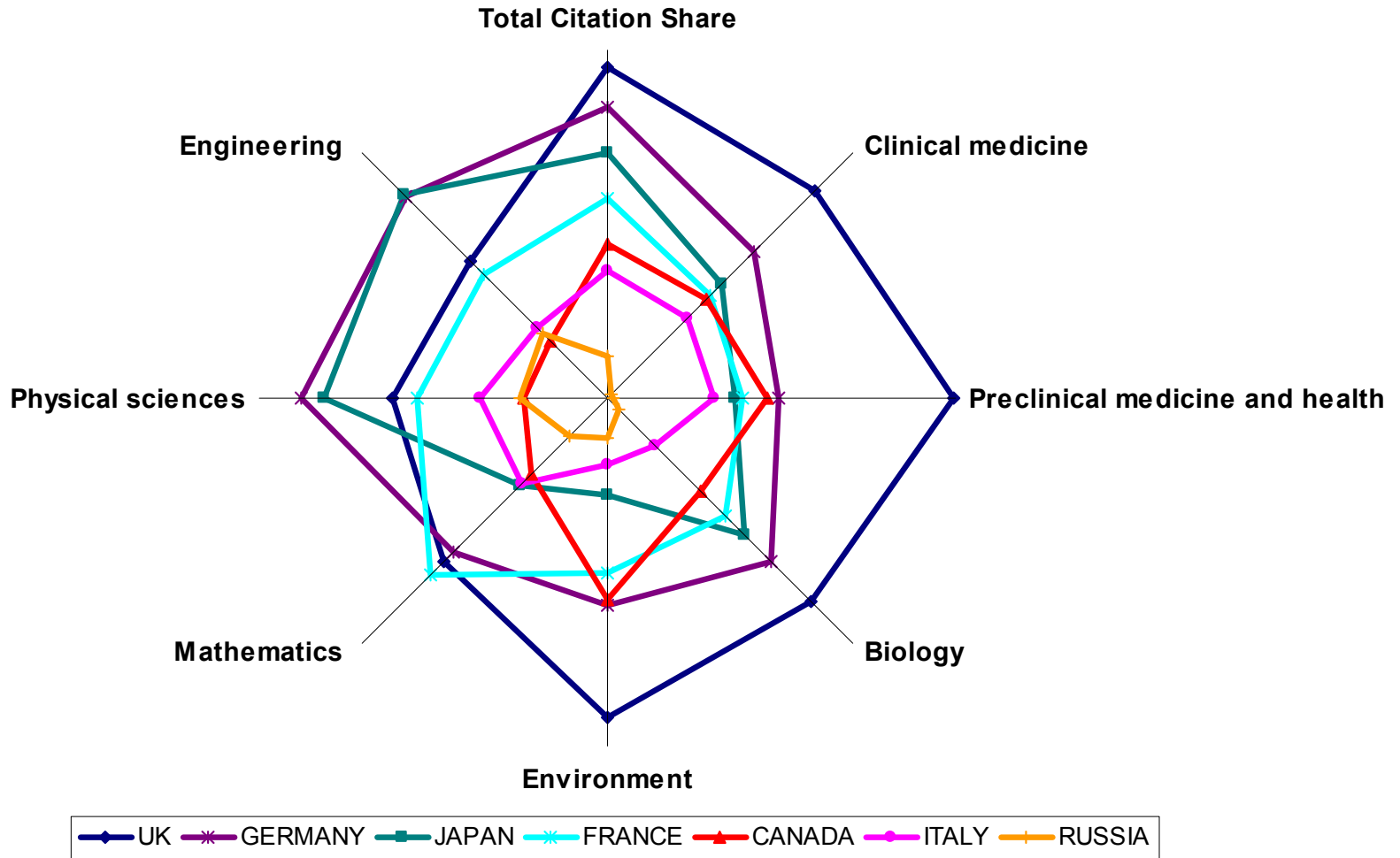
Source: D A King, Nature **430** (2004) 311 (15 July 2004)

Comparing disciplinary strengths for US, Europe and UK



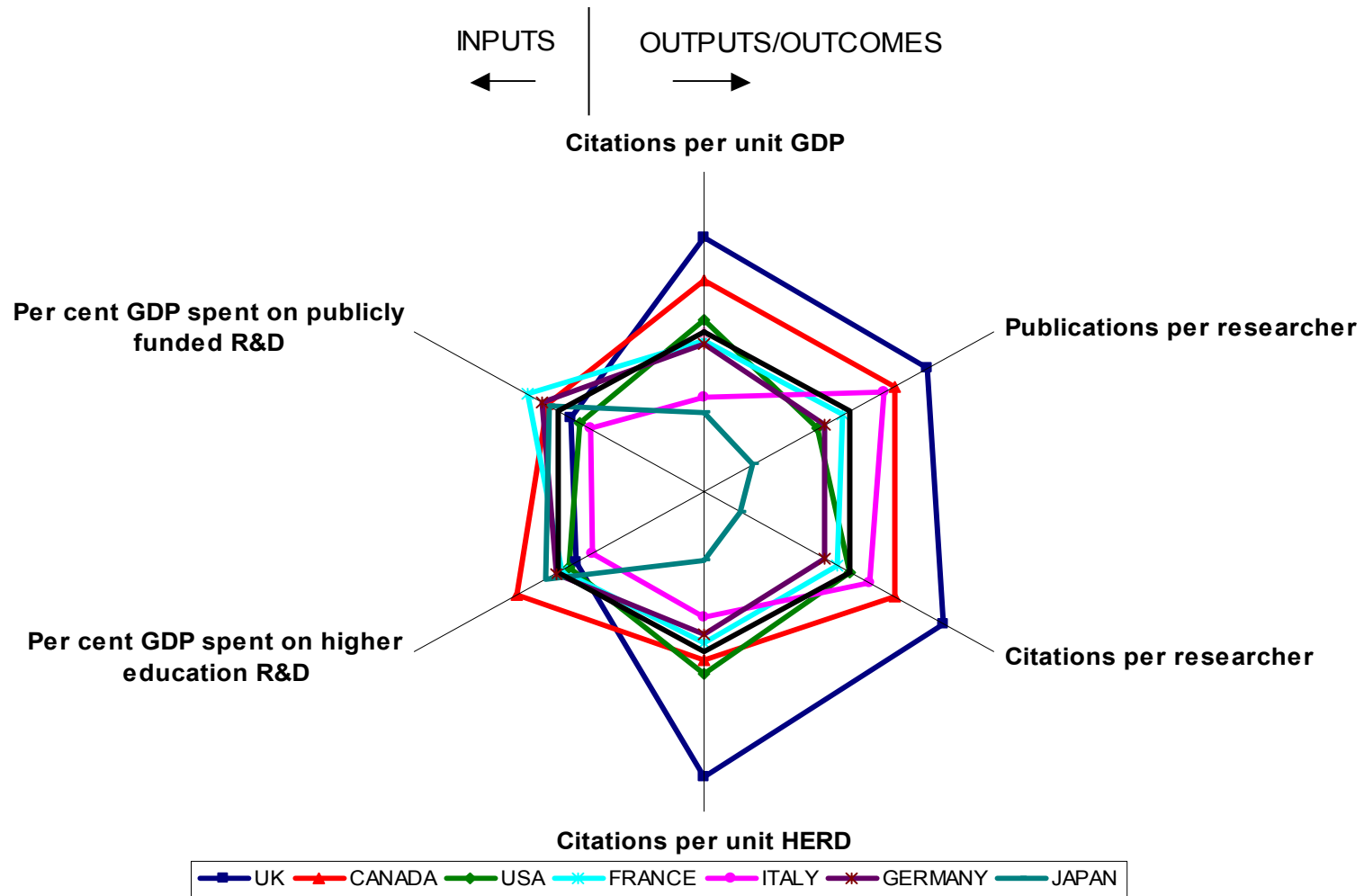
Source: D A King, Nature **430** (2004) 311 (15 July 2004)

National strengths in different disciplines (1997-2001)



Source: D A King, Nature **430** (2004) 311 (15 July 2004)

Comparing inputs and outputs/ outcomes



Source: D A King, Nature **430** (2004) 311 (15 July 2004)

Percentage of world share of publications

	China	France	Germany	Japan	Korea	UK	US	EU-15
1995	2.05	6.09	7.62	8.65	0.79	8.88	33.54	34.36
1998	2.90	6.48	8.82	9.42	1.41	9.08	31.63	36.85
2001	4.30	6.33	8.68	9.52	2.01	8.90	31.01	36.55
2004	6.52	5.84	8.14	8.84	2.70	8.33	30.48	35.18

Source: Adapted from P Zhou and Leydesdorff,
 ‘The emergence of China as a leading nation in science’ Research Policy 35, no1 (Feb 2006)

Citation rate per paper

(normalized to show re-based impact, RBI)

Country	1993-2002	2002
USA	1.41	1.48
Denmark	1.33	1.48
UK	1.21	1.39
Netherlands	1.33	1.39
Germany	1.15	1.33
Belgium	1.17	1.21
France	1.07	1.12
Italy	1.07	1.12
Spain	0.89	0.97
Japan	0.90	0.91
Poland	0.61	0.76
China	0.51	0.55
India	0.40	0.48

Source: Adapted from D A King, Nature **430** (2004) 313 (15 July 2004)

