

TABLE 4-13

Business expenditures for R&D, by selected countries and top R&D-performing industries: 2016 or most recent year

(PPP millions of current dollars and percent share)

Industry	ISIC Rev.4		United States (2016)	France (2016)	Germany (2016)	United Kingdom (2016)	China (2016)	Japan (2016)	South Korea (2015)
	Section	Division							
PPP current \$millions									
Total business enterprise	A-U	1-99	374,685	40,495	81,739	31,812	349,685	129,752	59,644
Manufacturing	C	10-33	250,533	20,242	69,422	13,166	304,342	112,766	53,446
Chemicals and chemical products		20	8,947	1,242	5,091	688	26,623	8,275	3,136
Pharmaceuticals, medicinal chemical, and botanical products		21	64,628	1,068	5,878	548	14,066	13,168	1,576
Computer, electronic, and optical products		26	77,385	4,836	9,936	1,560	57,494	25,599	29,893
Motor vehicles, trailers, and semi-trailers		29	22,042	2,904	28,478	4,220	30,198	34,042	7,550
Other transport equipment		30	29,233	3,937	2,635	2,595	13,235	1,087	1,011
Air and spacecraft and related machinery		303	26,645	3,590	2,194	2,369	NA	754	275
Total services	G-U	45-99	120,230	18,897	11,779	18,015	NA	15,310	4,802
Information and communication	J	58-63	86,495	4,926	4,334	4,573	NA	5,706	2,470
Publishing activities		58	33,574	1,407	NA	118	NA	18	1,620
Software publishing		582	33,495	1,383	NA	47	NA	NA	1,589
Computer programming, consultancy, and related activities		62	15,747	2,283	3,669	2,354	NA	2,094	255
Professional, scientific, and technical activities	M	69-75	21,848	10,487	6,524	10,242	NA	8,312	1,391
Scientific R&D		72	14,842	4,712	2,940	7,625	NA	7,641	402
Percentage of total business enterprise									
Total business enterprise	A-U	1-99	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing	C	10-33	66.9	50.0	84.9	41.4	87.0	86.9	89.6
Chemicals and chemical products		20	2.4	3.1	6.2	2.2	7.6	6.4	5.3
Pharmaceuticals, medicinal chemical, and botanical products		21	17.2	2.6	7.2	1.7	4.0	10.1	2.6
Computer, electronic, and optical products		26	20.7	11.9	12.2	4.9	16.4	19.7	50.1
Motor vehicles, trailers, and semi-trailers		29	5.9	7.2	34.8	13.3	8.6	26.2	12.7
Other transport equipment		30	7.8	9.7	3.2	8.2	3.8	0.8	1.7
Air and spacecraft and related machinery		303	7.1	8.9	2.7	7.4	NA	0.6	0.5
Total services	G-U	45-99	32.1	46.7	14.4	56.6	NA	11.8	8.1
Information and communication	J	58-63	23.1	12.2	5.3	14.4	NA	4.4	4.1
Publishing activities		58	9.0	3.5	NA	0.4	NA	0.0	2.7
Software publishing		582	8.9	3.4	NA	0.1	NA	NA	2.7
Computer programming, consultancy, and related activities		62	4.2	5.6	4.5	7.4	NA	1.6	0.4
Professional, scientific, and technical activities	M	69-75	5.8	25.9	8.0	32.2	NA	6.4	2.3
Scientific R&D		72	4.0	11.6	3.6	24.0	NA	5.9	0.7

NA = not available.

ISIC Rev.4 = International Standard Industrial Classification of All Economic Activities, Revision 4; PPP = purchasing power parity.

Note(s)

Detail may not add to total because of rounding. Industry classifications for all countries are based on main activity. The U.S. business R&D data are from the U.S. Business R&D and Innovation Survey 2016 (cross-walked to the ISIC Rev. 4 classifications). In general, the table includes industries with annual R&D expenditures of \$10 billion or more (i.e., each country's largest R&D performers). See the Organisation for Economic Co-operation and Development's (OECD's) ANalytical Business Enterprise Research and Development (ANBERD) database for a more detailed set of industries by country.

Source(s)

OECD, ANalytical Business Enterprise Research and Development (ANBERD) database.

Science and Engineering Indicators