

TABLE S6-8

## Value added of scientific R&amp;D services industry, by region, country, or economy: 2002–18

(Millions of current dollars)

Region, country, or economy	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
World	224,569	248,766	275,978	290,983	320,139	367,006	414,140	413,663	451,078	509,288	528,656	553,930	575,490	562,131	575,474	619,593	652,487
North America	89,252	91,431	94,507	95,245	101,192	106,027	117,464	117,624	119,450	123,505	125,080	126,329	130,870	141,518	145,709	151,072	155,251
Canada	2,120	2,560	2,946	3,370	3,906	4,473	4,660	4,471	4,832	5,556	5,356	5,553	5,307	4,539	3,960	3,798	3,992
Mexico	1,117	1,252	1,222	1,388	1,369	1,477	1,550	1,401	1,716	1,757	1,705	1,311	1,433	1,335	1,224	1,310	1,370
United States	86,015	87,619	90,340	90,487	95,917	100,077	111,254	111,752	112,902	116,192	118,019	119,465	124,130	135,644	140,526	145,964	149,780
Central and South America	7,645	7,520	9,146	10,525	12,464	15,509	18,451	19,685	22,432	26,742	30,081	31,854	30,911	31,160	27,284	31,430	30,916
Argentina	1,611	1,803	2,257	2,707	3,173	4,019	4,977	5,032	5,943	7,133	7,802	8,339	7,500	8,786	7,689	9,147	7,426
Bolivia	70	68	69	68	73	82	96	111	120	132	152	168	179	196	215	231	248
Brazil	316	280	375	554	790	1,199	1,436	1,477	1,725	2,145	2,171	1,920	2,091	1,615	1,626	2,044	1,871
Chile	1,597	1,580	2,146	2,176	2,805	3,320	3,757	4,061	4,779	5,994	6,853	7,431	6,900	6,387	6,361	7,044	7,646
Colombia	1,456	1,386	1,707	2,160	2,372	3,067	3,536	3,620	4,462	4,983	5,625	5,875	6,197	4,822	4,537	5,020	5,317
Costa Rica	201	210	233	263	310	382	453	498	606	702	826	927	1,036	1,265	1,334	1,380	1,421
Ecuador	437	490	521	568	632	739	837	857	996	1,170	1,313	1,519	1,613	1,605	1,494	1,565	1,647
Honduras	46	51	56	59	57	61	65	82	95	83	83	87	85	76	77	82	87
Jamaica	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Panama	264	282	303	320	355	366	414	476	535	591	643	732	776	830	882	959	1,038
Peru	473	464	503	543	610	721	918	969	1,183	1,356	1,583	1,727	1,704	1,620	1,617	1,756	1,845
Uruguay	283	216	225	286	323	388	516	589	778	935	1,065	1,224	1,232	1,168	1,172	1,350	1,375
Venezuela	890	690	751	821	962	1,165	1,447	1,913	1,210	1,519	1,963	1,904	1,599	2,789	282	852	996
Europe	72,154	88,152	101,637	107,134	116,576	139,045	155,784	142,794	151,720	169,357	166,905	184,002	184,873	159,055	163,337	177,739	190,054
EU	62,797	76,748	87,743	91,631	97,690	113,827	124,989	115,267	117,027	125,782	121,318	132,015	138,053	123,638	126,822	135,109	147,288
Austria	323	467	524	569	470	602	921	873	820	1,041	978	1,312	1,216	1,212	1,288	1,439	1,565
Belgium	698	842	1,095	1,191	1,121	1,173	1,457	1,679	1,575	1,689	1,614	1,867	2,035	1,784	2,018	2,368	2,586
Bulgaria	24	29	39	52	83	154	250	340	588	627	658	652	641	652	661	582	641
Czechia	560	567	627	669	694	886	1,088	1,008	953	1,161	1,141	1,190	1,313	1,283	1,404	1,596	1,749
Denmark	691	945	957	1,078	1,137	1,290	2,310	2,400	2,299	1,780	1,404	1,758	2,234	2,235	2,816	3,026	3,116
Finland	984	1,272	1,443	1,513	1,579	1,488	1,954	1,911	1,885	2,136	2,083	2,239	2,131	1,766	1,717	1,820	1,957
France	22,239	26,941	30,464	30,836	32,343	36,945	40,835	40,286	39,968	43,231	40,891	43,872	44,988	37,799	38,600	41,993	45,462
Germany	11,917	14,967	17,125	17,223	17,435	20,124	22,178	22,044	21,444	23,255	22,976	24,919	26,284	23,963	23,832	25,609	28,056
Greece	364	396	481	564	607	821	539	539	630	579	775	765	690	594	582	620	676
Hungary	369	488	605	717	741	837	931	793	868	972	890	987	1,097	983	1,090	1,224	1,359
Ireland	98	171	428	579	587	869	762	559	795	617	518	978	1,385	2,113	2,749	2,815	3,566
Italy	5,996	7,571	8,585	9,051	9,909	11,181	12,146	11,355	11,235	11,618	11,012	11,553	11,491	9,604	9,596	10,434	11,044
Netherlands	1,748	2,186	2,493	2,543	2,754	3,062	3,398	3,424	3,345	3,336	3,057	3,489	3,557	3,118	3,263	3,526	3,906
Poland	785	807	905	1,140	1,301	1,876	2,302	1,906	2,151	2,389	2,375	2,215	2,652	2,280	2,335	2,800	3,026
Portugal	165	205	253	280	369	484	610	615	600	595	593	681	813	640	654	737	804

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(Millions of current dollars)

Region, country, or economy	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Romania	230	389	453	662	1,292	1,845	2,805	2,511	2,392	3,303	3,145	5,004	4,999	4,974	5,161	5,060	5,686
Slovakia	87	88	155	156	168	203	231	199	199	222	199	268	246	227	288	293	325
Spain	1,856	2,498	2,925	3,271	3,633	4,255	4,993	5,007	5,058	5,584	5,339	5,619	5,868	5,268	5,298	5,490	6,305
Sweden	3,153	4,325	6,071	6,384	6,824	8,559	7,179	5,458	7,447	8,057	7,857	9,521	9,543	8,365	8,847	10,135	10,702
United Kingdom	10,508	11,592	12,115	13,153	14,644	17,174	18,100	12,360	12,775	13,591	13,812	13,126	14,869	14,779	14,623	13,545	14,758
Other Europe	9,357	11,404	13,894	15,503	18,886	25,218	30,795	27,528	34,693	43,575	45,587	51,987	46,821	35,417	36,515	42,629	42,766
Norway	728	832	1,003	893	1,050	1,316	1,478	1,450	1,599	1,679	1,785	1,838	1,765	1,531	1,602	1,784	1,945
Russia	4,696	5,859	7,080	7,993	10,571	14,597	18,243	14,924	20,873	28,714	29,394	34,574	29,851	19,250	18,400	22,471	23,046
Switzerland	2,392	2,732	3,172	3,229	3,264	3,645	4,125	4,756	4,921	5,544	5,699	5,931	6,271	6,174	8,184	8,948	9,228
Turkey	1,268	1,669	2,206	2,800	3,249	4,432	5,370	5,106	6,057	6,257	6,801	7,456	7,470	7,516	7,331	8,306	7,259
Ukraine	274	312	433	587	752	1,228	1,579	1,293	1,243	1,380	1,908	2,188	1,463	947	997	1,120	1,289
Middle East	7,560	8,469	9,662	10,642	12,781	16,233	19,112	20,530	22,743	26,230	24,700	25,044	27,370	27,999	29,629	31,658	30,354
Bahrain	99	106	121	140	157	181	196	204	225	212	226	235	255	265	281	299	332
Iran	2,027	2,453	2,972	3,545	4,510	6,202	7,438	8,323	9,381	10,796	8,384	6,477	7,392	7,688	8,281	8,768	6,309
Israel	2,977	3,204	3,362	3,358	3,837	4,376	5,229	5,852	6,676	8,079	7,899	9,100	9,657	9,417	9,982	11,184	11,689
Jordan	157	165	177	180	185	197	187	212	234	256	279	301	325	341	360	382	408
Kuwait	68	76	81	89	93	101	108	99	111	195	199	205	217	221	224	236	281
Qatar	50	52	100	124	307	466	577	612	595	806	945	1,115	1,205	1,336	1,467	1,304	1,436
Saudi Arabia	867	903	1,009	1,104	1,218	1,347	1,536	1,823	2,006	2,171	2,677	3,097	3,345	3,454	3,551	3,735	4,005
United Arab Emirates	1,316	1,512	1,840	2,102	2,473	3,362	3,842	3,405	3,514	3,715	4,092	4,514	4,974	5,276	5,483	5,750	5,895
Africa	3,973	5,059	6,090	7,095	8,609	9,639	10,241	10,365	12,058	14,933	15,843	16,499	17,765	16,581	15,257	14,630	16,017
Cameroon	142	178	203	221	245	272	311	326	331	374	376	419	433	379	417	432	480
Egypt	275	221	211	295	362	432	505	608	691	1,738	2,303	2,295	2,469	2,611	2,318	1,652	2,071
Kenya	66	75	75	86	103	129	145	149	154	146	178	198	208	199	210	220	238
Morocco	471	597	697	779	872	1,069	1,173	1,295	1,282	1,420	1,416	1,512	1,556	1,376	1,426	1,525	1,657
Nigeria	1,427	1,605	1,953	2,377	3,503	3,874	4,340	3,571	4,076	5,129	6,118	6,938	7,964	7,455	6,512	5,692	6,189
Senegal	107	133	154	163	180	222	267	265	265	298	285	311	321	214	282	317	349
South Africa	1,180	1,884	2,394	2,759	2,881	3,118	2,922	3,535	4,637	5,145	4,513	4,117	4,083	3,684	3,425	4,131	4,359
Tunisia	305	366	403	415	463	522	579	615	622	682	654	709	731	664	667	662	674
Zimbabwe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Asia	38,031	40,341	45,250	49,241	55,933	64,885	75,969	85,413	100,713	121,758	137,298	143,477	158,405	164,254	170,064	185,349	201,388
Bangladesh	511	542	569	567	676	736	811	953	1,039	1,070	1,115	1,354	1,580	1,811	2,139	2,445	2,620
China	7,817	7,762	9,274	12,442	15,783	20,846	26,842	34,528	41,316	54,005	66,628	73,081	82,649	89,417	88,537	98,644	111,223
India	2,369	2,789	3,661	4,413	5,168	6,793	8,050	9,143	11,801	13,840	14,860	17,272	20,522	21,865	24,444	27,404	29,151
Indonesia	659	852	951	1,078	1,378	1,553	1,739	1,914	2,578	3,071	3,179	3,165	3,155	3,176	3,558	4,006	4,177
Japan	18,204	18,958	19,984	17,704	16,813	16,377	18,838	19,438	20,873	23,154	22,232	17,298	16,432	14,279	16,195	16,118	16,413

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(Millions of current dollars)

Region, country, or economy	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Malaysia	444	482	524	726	802	966	1,123	1,202	1,498	1,712	1,899	2,072	2,184	1,982	2,043	2,089	2,342
Pakistan	594	671	755	999	1,948	2,167	2,212	2,380	2,725	3,262	3,613	3,832	4,524	4,953	5,429	6,021	5,603
Philippines	711	738	805	920	1,118	1,389	1,670	1,760	2,075	2,392	2,786	2,625	2,668	2,775	3,358	3,474	3,570
Singapore	699	737	782	872	1,038	1,283	1,629	1,690	2,185	2,689	2,904	3,157	3,300	3,142	3,265	3,407	3,594
South Korea	2,948	3,350	3,982	4,948	5,895	6,728	6,417	5,948	7,146	8,075	8,802	9,961	11,816	11,647	11,936	11,876	12,314
Sri Lanka	125	131	127	148	182	219	242	264	290	351	393	407	408	402	367	402	403
Taiwan	1,965	2,189	2,474	2,880	3,338	3,639	3,940	3,906	4,428	5,005	5,154	5,280	5,325	5,159	5,196	5,520	5,694
Thailand	776	910	1,105	1,261	1,480	1,822	1,997	1,780	2,214	2,518	3,020	3,156	2,967	2,736	2,629	2,919	3,219
Vietnam	209	228	257	282	313	365	461	506	544	614	712	816	874	909	967	1,023	1,066
Oceania	5,954	7,794	9,685	11,100	12,586	15,668	17,118	17,252	21,962	26,762	28,749	26,724	25,295	21,563	24,195	27,715	28,507
Australia	5,913	7,742	9,625	11,032	12,516	15,564	16,940	17,115	21,896	26,650	28,583	26,543	25,175	21,482	24,104	27,616	28,404
New Zealand	41	51	60	68	70	104	178	137	66	112	166	181	120	81	91	100	102

EU = European Union.

**Note(s):**

Value added is the amount contributed by a country, firm, or other entity to the value of a good or service and excludes purchases of domestic and imported materials and inputs. Detail may not add to total because of rounding or minor discrepancies. World total does not include all countries and economies due to limitations in data availability. See Table S6-1 for a full list of countries and economies in each region.

**Source(s):**

IHS Markit, special tabulations (2019) of Comparative Industry Service.

Science and Engineering Indicators