

Table RD-5

GERD, GDP, GERD-to-GDP ratio, and growth rates, by selected region, country, or economy: Selected years, 1990–2021

(Billions of U.S. current PPP dollars and percent)

Region, country, or economy	GERD				GDP				GERD-to-GDP ratio (%)				Longer-term growth rates (CAGR)					
													GERD			GDP		
	1990	2000	2010	2021 ^a	1990	2000	2010	2021 ^a	1990	2000	2010	2021 ^a	1990–2000	2000–10	2010–21 ^a	1990–2000	2000–10	2010–21 ^a
United States	152.4	268.6	408.5	806.0	5,963	10,251	15,049	23,315	2.56	2.62	2.71	3.46	5.8	4.3	6.4	5.6	3.9	4.1
EU-27	NA	158.8	270.2	474.1	NA	9,479	14,512	21,988	NA	1.68	1.86	2.16	NA	5.5	5.2	NA	4.4	3.8
China	NA	32.9	212.2	667.6	1,114	3,683	12,380	27,446	NA	0.89	1.71	2.43	NA	20.5	11.0	12.7	12.9	7.5
Japan	65.4	98.9	140.5	177.4	2,459	3,461	4,525	5,383	2.66	2.86	3.10	3.30	4.2	3.6	2.1	3.5	2.7	1.6
Germany	36.0	53.9	87.0	153.7	1,380	2,237	3,185	4,913	2.61	2.41	2.73	3.13	4.1	4.9	5.3	4.9	3.6	4.0
South Korea	NA	18.5	52.1	119.6	358	871	1,573	2,426	NA	2.13	3.32	4.93	NA	10.9	7.8	9.3	6.1	4.0
United Kingdom	19.1	25.2	37.5	97.8	978	1,563	2,296	3,355	1.95	1.61	1.63	2.91	2.8	4.1	9.1	4.8	3.9	3.5
France	23.4	33.3	50.9	77.2	1,028	1,590	2,335	3,480	2.27	2.09	2.18	2.22	3.6	4.3	3.9	4.5	3.9	3.7
Taiwan	NA	9.1	25.0	55.6	204	478	890	1,472	NA	1.91	2.82	3.77	NA	10.6	7.5	8.9	6.4	4.7
Russia (2020)	24.1	10.5	33.1	48.0	1,275	1,074	3,144	4,367	1.89	0.98	1.05	1.10	-8.0	12.2	3.8	-1.7	11.3	3.3
Italy	12.7	15.5	25.4	40.1	1,057	1,542	2,084	2,761	1.20	1.00	1.22	1.45	2.0	5.1	4.3	3.8	3.1	2.6
Canada	8.3	16.7	24.9	34.4	560	901	1,364	2,027	1.48	1.86	1.83	1.70	7.3	4.0	3.0	4.9	4.2	3.7
Turkey	1.1	2.8	10.1	36.2	457	609	1,269	2,582	0.24	0.47	0.79	1.40	10.2	13.5	12.3	2.9	7.6	6.7
Spain	4.1	7.7	20.1	27.6	532	876	1,476	1,928	0.78	0.88	1.36	1.43	6.4	10.0	2.9	5.1	5.4	2.5
Netherlands	5.5	9.1	12.8	25.7	287	508	748	1,131	1.92	1.79	1.70	2.27	5.2	3.4	6.6	5.9	4.0	3.8

NA = not available.

CAGR = compound annual growth rate; EU-27 = European Union; GDP = gross domestic product; GERD = gross domestic expenditures on R&D; PPP = purchasing power parity.

^a Data are for 2021 or the most recent year with GERD data available.**Note(s):**

The most recent year of GERD data for Russia was 2020. Data for U.S. GERD differ slightly from the U.S. total R&D data tabulated elsewhere in this report. For better consistency with international standards, U.S. GERD includes federal capital funding for federal intramural and nonprofit R&D, in addition to what is reported as U.S. total R&D. Some data are preliminary and may be revised later. Foreign currencies are converted by the Organisation for Economic Co-operation and Development (OECD) to U.S. dollars using PPP. U.S. data have been adjusted for international comparability. For more information on GERD and GDP statistics across regions, countries, or economies, see Table SRD-1.

Source(s):National Center for Science and Engineering Statistics, National Patterns of R&D Resources (2020–21 edition); OECD, *Main Science and Technology Indicators*, September 2023, https://stats.oecd.org/Index.aspx?DataSetCode=MSTI_PUB.*Science and Engineering Indicators*