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Gross domestic expenditure on research and development, by funding and performing sectors in selected OECD countries

Country	Year ¹	R&D expenditure		Financed by			Performed by			
		Millions of US-\$ ²	Share of GDP in %	Business enterprise sector	Government sector	Other national sources and abroad	Business enterprise sector	Government sector	Higher education sector ³	PNP sector ⁴
Germany ⁵	2019	153,293.2	3.11	64.5	27.8	7.7	68.9	13.7	17.4	y
	2020	150,788.8	3.09	62.6	29.7	7.7	66.6	14.6	18.7	y
	2021	160,158.6	3.08	62.8	30.0	7.3	66.9	14.8	18.3	y
	2022	173,935.9	3.07	-	-	-	67.4	12.1	18.1	2.4
	2023	178,970.4	3.11	-	-	-	68.3	12.1	17.2	2.4
Belgium	2019	20,534.4	3.15	64.3	17.8	17.9	73.7	8.8	16.7	0.8
	2020	21,810.9	3.37	-	-	-	73.9	8.8	16.7	0.7
	2021	23,940.9	3.41	64.4	17.3	18.3	74.7	8.6	16.2	0.5
	2022	26,202.5	3.29	-	-	-	73.7	8.8	17.0	0.5
	2023	27,058.1	3.32	-	-	-	74.1	9.2	16.1	0.6
Denmark	2019	10,238.8	2.91	59.2	28.7	12.1	62.1	3.0	34.5	0.4
	2020	10,839.0	2.97	-	-	-	61.6	3.4	34.6	0.4
	2021	11,200.7	2.74	-	-	-	62.1	3.4	34.1	0.4
	2022	13,099.6	2.87	-	-	-	61.4	3.1	35.3	0.3
	2023	13,093.2	2.99	-	-	-	61.2	3.1	35.4	0.3
Finland ⁶	2019	8,126.4	2.82	54.3	27.8	17.9	65.6	8.1	25.4	0.9
	2020	8,643.1	2.93	56.0	27.7	16.4	67.0	7.6	24.6	0.8
	2021	9,475.9	3.01	58.1	25.6	16.3	68.8	7.3	23.1	0.8
	2022	10,164.2	2.98	58.1	25.9	16.1	68.0	7.3	24.0	0.7
	2023	10,644.0	3.09	-	-	-	67.6	7.6	24.2	0.6
Israel ⁷	2019	20,037.2	5.36	37.0	9.1	53.9	89.6	1.3	8.3	0.8
	2020	22,010.7	5.83	40.1	9.3	50.5	90.5	1.2	7.6	0.7
	2021	24,906.1	5.76	45.3	7.9	46.8	91.5	1.1	6.7	0.7
	2022	31,629.3	6.18	47.2	6.8	46.0	92.5	0.9	5.9	0.6
	2023	33,376.1	6.35	-	-	-	93.0	0.9	5.5	0.6
Japan ⁸	2019	173,928.4	3.22	78.9	14.7	6.4	79.2	7.8	11.7	1.3
	2020	174,926.4	3.27	78.3	15.2	6.5	78.7	8.3	11.7	1.4
	2021	182,504.4	3.27	78.1	15.5	6.5	78.6	8.4	11.9	1.2
	2022	201,665.3	3.40	78.5	15.1	6.4	79.4	7.9	11.5	1.2
	2023	213,803.5	3.44	78.0	15.9	6.1	79.1	8.7	11.1	1.1
Austria	2019	16,850.5	3.14	54.8	27.0	18.2	70.3	7.3	21.8	0.5
	2020	16,738.5	3.21	49.8	33.3	16.9	69.5	7.5	22.4	0.6
	2021	18,359.8	3.26	53.0	28.5	18.6	68.9	7.5	23.1	0.5
	2022	20,324.1	3.18	51.7	31.2	17.1	68.9	7.5	23.1	0.5
	2023	21,189.6	3.29	51.2	32.6	16.3	68.9	7.5	23.1	0.5
Sweden ⁹	2019	19,927.7	3.40	62.4	24.2	13.1	71.7	4.5	23.7	0.1
	2020	20,843.2	3.50	-	-	-	72.3	4.4	23.1	0.1
	2021	22,317.9	3.42	60.7	23.3	15.8	72.4	4.4	23.0	0.1
	2022	24,170.5	3.47	-	-	-	73.6	4.2	22.0	0.2
	2023	25,511.3	3.60	-	-	-	74.3	4.1	21.4	0.2

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		Millions of US-\$ ²	Share of GDP in %	Business enterprise sector	Government sector	Other national sources and abroad	Business enterprise sector	Government sector	Higher education sector ³	PNP sector ⁴
Switzerland ¹⁰	2019	20,212.5	3.20	64.7	27.3	8.0	67.6	0.9	28.8	2.7
	2020	-	-	-	-	-	-	-	-	-
	2021	23,258.8	3.30	65.9	26.8	7.3	68.3	0.9	28.2	2.6
	2022	-	-	-	-	-	-	-	-	-
	2023	-	-	-	-	-	-	-	-	-
South Korea	2019	105,064.4	4.36	76.9	20.7	2.4	80.3	10.0	8.3	1.4
	2020	112,221.2	4.52	76.6	22.4	1.0	79.1	10.1	9.0	1.8
	2021	123,074.1	4.60	76.1	22.8	1.1	79.1	9.8	9.1	2.0
	2022	137,943.8	4.85	76.3	22.6	1.1	79.4	9.4	9.1	2.1
	2023	143,741.2	4.96	76.1	22.9	1.1	79.2	9.6	9.1	2.1
United Kingdom ¹¹	2019	89,091.2	2.67	59.0	18.0	23.1	70.7	4.5	23.5	1.4
	2020	94,638.5	2.94	57.4	19.6	23.0	71.1	5.0	22.4	1.5
	2021	99,066.8	2.90	58.5	19.4	22.1	70.8	5.1	22.6	1.5
	2022	110,753.7	2.80	61.9	18.3	19.7	70.6	5.1	23.0	1.2
	2023	-	-	-	-	-	-	-	-	-
United States ¹²	2019	676,995.0	3.14	65.7	21.1	13.2	75.1	9.6	11.5	3.8
	2020	729,857.0	3.42	66.3	21.3	12.4	76.0	9.2	11.1	3.7
	2021	821,478.0	3.47	69.0	18.8	12.3	77.9	8.3	10.4	3.3
	2022	906,953.0	3.49	69.7	18.9	11.4	78.4	8.1	10.4	3.1
	2023	955,578.0	3.45	69.6	18.9	11.5	78.4	7.9	10.7	3.0

y = data included in another position.

- 1 Some figures are revised, provisional, estimated or only partly comparable with figures from previous years or include other sectors (see original edition of "Main Science and Technology Indicators March 2025").
- 2 Nominal expenditures converted into US dollar purchasing power parities.
- 3 Including general funding for higher education research.
- 4 PNP: private non-profit institutions.
- 5 Until 2021, the PNP sector is included in the performance data of the government sector. For more recent calculations of the share of GDP for 2023, see Table 1.1.1.
- 6 funds received by the state research institutes from external sources are excluded from government allocations.
- 7 Defence R&D is excluded.
- 8 Government expenditure on R&D only includes spending by the central government and covers only expenditure related to science and technology.
- 9 As of 2023, a break in the time series occurs due to a methodological change in data collection.
- 10 The business enterprise sector comprises private enterprises only. Public enterprises are included in the Government sector.
- 11 As of 2022, business R&D data are based on an expanded coverage survey (larger sample size) and additional methodological improvements.
- 12 Excludes most or all capital expenditure (included in the business enterprise and government sector only). As of 2021, the increase in R&D capital expenditure in the business enterprise sector is due to a methodological change in data collection.

Last update: April 14, 2025

This table also appears in the Federal Report on Research and Innovation as Table 3.

Source: OECD (Main Science and Technology Indicators March 2025) and calculations of the German Centre for Higher Education Research and Science Studies

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