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Gross domestic expenditure on R&D (GERD) of the Federal Republic of Germany, by performing sectors

Millions of €						
Performing sectors ^{1 2}	1981	1991	2000	2010	2016	2017
Business enterprise sector³						
Financed by						
Business enterprise sector	10,945	22,845	32,333	43,183	56,386	62,214
Government sector	2,260	2,640	2,448	2,096	2,088	2,181
Private non-profit sector	30	76	71	40	167	88
Abroad	159	685	748	1,610	4,185	4,305
Total	13,394	26,246	35,600	46,929	62,826	68,787
Government and private non-profit sector⁴						
Financed by						
Business enterprise sector	35	71	151	927	1,431	1,363
Government sector	2,601	5,214	6,444	8,805	10,459	11,161
Private non-profit sector	49	120	137	124	165	257
Abroad	27	53	141	498	665	703
Total	2,712	5,457	6,873	10,354	12,721	13,484
Higher education sector⁵						
Financed by						
Business enterprise sector	59	433	986	1,763	2,299	2,307
Government sector	3,255	5,713	7,169	10,360	13,720	14,254
Private non-profit sector	-	-	-	-	-	-
Abroad	-	-	198	609	608	721
Total	3,313	6,145	8,352	12,731	16,627	17,282
Gross domestic expenditure on R&D						
Financed by						
Business enterprise sector	11,039	23,348	33,470	45,873	60,116	65,884
Government sector	8,116	13,567	16,061	21,260	26,267	27,596
Private non-profit sector	78	196	208	164	332	344
Abroad	186	738	1,086	2,716	5,458	5,729
Total	19,420	37,848	50,825	70,014	92,174	99,554
GERD as a percentage of GDP ⁶	2.43	2.38	2.39	2.68	2.88	2.99

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Gross domestic expenditure on R&D (GERD) of the Federal Republic of Germany, by performing sectors

Millions of €						
Performing sectors ^{1,2}	2018	2019	2020	2021	2022	2023 ⁷
Business enterprise sector³						
Financed by						
Business enterprise sector	65,204	66,856	62,625	67,023	72,373	-
Government sector	2,234	2,421	2,268	2,667	2,880	-
Private non-profit sector	91	113	106	89	97	-
Abroad	4,573	6,441	6,034	5,982	6,460	-
Total	72,101	75,830	71,032	75,761	81,809	88,707
Government and private non-profit sector⁴						
Financed by						
Business enterprise sector	1,401	1,464	1,527	1,328	1,385	-
Government sector	11,746	12,463	12,913	14,147	14,871	-
Private non-profit sector	272	283	292	274	299	-
Abroad	749	811	857	1,012	1,050	-
Total	14,168	15,022	15,589	16,761	17,605	18,574
Higher education sector⁵						
Financed by						
Business enterprise sector	2,484	2,599	2,584	2,704	2,874	-
Government sector	15,169	15,708	16,478	17,101	18,060	-
Private non-profit sector	-	-	-	-	-	-
Abroad	747	865	901	857	1,073	-
Total	18,400	19,173	19,962	20,661	22,007	22,395
Gross domestic expenditure on R&D						
Financed by						
Business enterprise sector	69,090	70,919	66,736	71,055	76,633	-
Government sector	29,149	30,592	31,658	33,915	35,811	-
Private non-profit sector	362	396	398	363	395	-
Abroad	6,069	8,118	7,791	7,851	8,582	-
Total	104,669	110,025	106,583	113,184	121,421	129,676
GERD as a percentage of GDP ⁶	3.05	3.11	3.09	3.08	3.07	3.10

1 Data from surveys of the relevant performing sectors. In 1981, the former Federal Republic of Germany; as of 1991, all of Germany. Due to revision of the calculation method, the data up to 1991 are only partly comparable with data from later publications.

2 Figures for even years are partly estimated.

3 Companies and institutions for co-operative research; intramural R&D expenditures (OECD concept) of business enterprises; in 1981, including non-apportionable government funding; as of 2000, government R&D funding for business enterprises pursuant to figures of funding institutions -- Federal Government and Länder. Until 2010 the funding source data of the Stifterverband Wissenschaftsstatistik, which have been obtained from R&D-performing reporting units, differ from this, since the performing reporting units are not always able to clearly identify the original funding source.

4 Non-university research institutions (e.g., Max Planck Society, Fraunhofer Society). Government: federal, Länder and municipal (research) institutions; as of 1981, Federal Government institutions; as of 1991, Länder institutions with their R&D shares only. As of 2000, modified survey procedure and expanded reporting scope. Until 2010, including external expenditure on research and development.

5 As of 2016, changed calculation method.

6 Gross Domestic Product (GDP): until reporting year 2022 status January 2024, reporting year 2023 status January 2025. As of 1991, results of the national accounts general revision 2024 based on ESA 2010.

7 Data are provisional.

Last update: March 10, 2025

This table also appears in the Federal Report on Research and Innovation as Table 1.

Source: Special evaluation of the Federal Statistical Office, the Stifterverband Wissenschaftsstatistik and the Federal Ministry of Education and Research

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