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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	2015	2016
Business enterprise sector³						
Financed by						
Business enterprise sector	10,945	22,845	32,333	43,183	54,704	56,386
Government sector	2,260	2,640	2,448	2,096	2,026	2,088
Private non-profit sector	30	76	71	40	162	167
Abroad	159	685	748	1,610	4,060	4,185
Total	13,394	26,246	35,600	46,929	60,952	62,826
Government and private non-profit sector⁴						
Financed by						
Business enterprise sector	35	71	151	927	1,406	1,431
Government sector	2,601	5,214	6,444	8,805	10,262	10,459
Private non-profit sector	49	120	137	124	157	165
Abroad	27	53	141	498	661	665
Total	2,712	5,457	6,873	10,354	12,486	12,721
Higher education sector⁵						
Financed by						
Business enterprise sector	59	433	986	1,763	2,129	2,299
Government sector	3,255	5,713	7,169	10,360	12,474	13,720
Private non-profit sector	-	-	-	-	-	-
Abroad	-	-	198	609	742	608
Total	3,313	6,145	8,352	12,731	15,344	16,627
Gross domestic expenditure on R&D						
Financed by						
Business enterprise sector	11,039	23,348	33,470	45,873	58,239	60,116
Government sector	8,116	13,567	16,061	21,260	24,762	26,267
Private non-profit sector	78	196	208	164	319	332
Abroad	186	738	1,086	2,716	5,462	5,458
Total	19,420	37,848	50,825	70,014	88,782	92,174
GERD as a percentage of GDP ⁶	2.43	2.38	2.39	2.68	2.88	2.88

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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}	2017	2018	2019	2020	2021	2022
Business enterprise sector³						
Financed by						
Business enterprise sector	62,214	65,204	66,856	62,625	67,023	72,373
Government sector	2,181	2,234	2,421	2,268	2,667	2,880
Private non-profit sector	88	91	113	106	89	97
Abroad	4,305	4,573	6,441	6,034	5,982	6,460
Total	68,787	72,101	75,830	71,032	75,761	81,809
Government and private non-profit sector⁴						
Financed by						
Business enterprise sector	1,363	1,401	1,464	1,527	1,328	1,385
Government sector	11,161	11,746	12,463	12,913	14,147	14,871
Private non-profit sector	257	272	283	292	274	299
Abroad	703	749	811	857	1,012	1,050
Total	13,484	14,168	15,022	15,589	16,761	17,605
Higher education sector⁵						
Financed by						
Business enterprise sector	2,307	2,484	2,599	2,584	2,704	2,874
Government sector	14,254	15,169	15,708	16,478	17,101	18,060
Private non-profit sector	-	-	-	-	-	-
Abroad	721	747	865	901	857	1,073
Total	17,282	18,400	19,173	19,962	20,661	22,007
Gross domestic expenditure on R&D						
Financed by						
Business enterprise sector	65,884	69,090	70,919	66,736	71,055	76,633
Government sector	27,596	29,149	30,592	31,658	33,915	35,811
Private non-profit sector	344	362	396	398	363	395
Abroad	5,729	6,069	8,118	7,791	7,851	8,582
Total	99,554	104,669	110,025	106,583	113,184	121,421
GERD as a percentage of GDP ⁶	2.99	3.05	3.11	3.09	3.08	3.07

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 The increase of the expenditure on higher education is partly methodologically conditioned by the recalculation of R&D coefficients from 2016 onwards.

6 Gross Domestic Product (GDP) status: August 2024. As of 1991, results of the national accounts general revision 2024 based on ESA 2010.

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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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