

**Fig. 12 Intramural R&D expenditures and R&D personnel of the economy, by industry sectors (2016-2018)**

Economic activity <sup>1</sup>		Intramural R&D expenditures (in millions of euros)			R&D personnel (in full-time equivalents)		
		2016	2017	2018	2016	2017	2018
<b>A</b>	<b>Agriculture, forestry and fishing</b>	158	169	172	1,429	1,379	1,579
<b>B</b>	<b>Mining and quarrying</b>	21	25	24	204	237	240
<b>C</b>	<b>Manufacturing</b>	53,359	58,494	61,574	332,280	346,443	358,207
	of which						
	Chemicals and chemical products	3,913	4,065	4,193	21,667	21,969	21,409
	Basic pharmaceutical products and pharmaceutical preparations	4,518	4,631	5,226	19,429	20,071	21,176
	Computer, electronic and optical products	7,637	7,739	8,281	61,135	54,573	56,423
	Machinery and equipment	5,652	7,117	7,111	44,464	49,323	50,202
	Motor vehicles, trailers and semi-trailers	21,889	25,656	27,076	113,865	126,413	131,597
<b>D</b>	<b>Electricity and water supply, waste management</b>	155	177	157	711	1,006	1,005
<b>F</b>	<b>Construction</b>	80	85	82	991	1,147	1,116
<b>J</b>	<b>Information and communication</b>	3,331	3,380	3,603	24,266	25,991	26,941
<b>K</b>	<b>Financial and insurance activities</b>	292	248	236	1,325	1,312	1,243
<b>M</b>	<b>Professional, scientific and technical activities</b>	5,015	5,594	5,575	47,551	53,359	54,515
	<b>Remaining categories</b>	416	617	678	4,269	5,697	6,212
	<b>Total</b>	<b>62,826</b>	<b>68,787</b>	<b>72,101</b>	<b>413,027</b>	<b>436,571</b>	<b>451,057</b>

**Explanation of abbreviations/symbols:** R&D = research and development.

1) Classification of economic activities, 2008 edition.

**Source:** Stifterverband Wissenschaftsstatistik

**BMBF's Data Portal:** Figure link: [datenportal.bmbf.de/fig-12](https://datenportal.bmbf.de/fig-12)

Additional data: [datenportal.bmbf.de/en/1.5.1](https://datenportal.bmbf.de/en/1.5.1)

[datenportal.bmbf.de/en/1.7.4](https://datenportal.bmbf.de/en/1.7.4)