

SDG Goal	9	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
SDG Target	9.5	Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
SDG Indicator	9.5.1	Research and development expenditure as a proportion of GDP

1. Name of data series	
Proportion of R&D expenditures to GDP	
Compliant with SDG metadata: yes	SDG Metadata

2. Definition of indicator	
Research and development (R&D) expenditure as a proportion of Gross Domestic Product (GDP) is the amount of R&D expenditure divided by the total output of the economy.	
3. Comparison with SDG metadata (as of 11/07/2017)	
The provided time series meets the required UN-metadata.	

4. Data description	
<p>Research and experimental development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge. Expenditures on intramural R&D represent the amount of money spent on R&D that is performed within a reporting unit.</p> <p>The data on GDP is calculated by the Federal Statistical Office's National Accounts as a secondary statistic. GDP is adjusted based on a price base changing every year (previous year's price base). After several revisions due to new data input, final results are available four years after the first preliminary release.</p>	
5. Calculation method	
$\text{Proportion of R\&D expenditures to GDP} = \frac{\text{R\&D expenditure [Mn EUR]}}{\text{GDP [Mn EUR]}} \cdot 100$	
6. Unit of measure	%

7. Timeliness	8. Frequency
t + 15 months	Annual
9. Last regular revision	10. Revised period
21 March 2018	Not available

11. Accessibility of source data
<p>Expenditure, revenue, and human resources of public and publically funded institutions for science, research and development (only available in German): “Ausgaben, Einnahmen und Personal der öffentlichen und öffentlich geförderten Einrichtungen für Wissenschaft, Forschung und Entwicklung“ – Fachserie 14, Reihe 3.6; table 1.1 https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bildung-Forschung-Kultur/Forschung-Entwicklung/_inhalt.html#sprg233698</p> <p>and</p> <p>GDP calculation – detailed annual results (only available in German): “Inlandsproduktsberechnung - Detaillierte Jahresergebnisse” – Fachserie 18, Reihe 1.4; table 2.1.1 https://www.destatis.de/DE/Themen/Wirtschaft/Volkswirtschaftliche-Gesamtrechnungen-Inlandsprodukt/_inhalt.html#sprg233858</p>
12. Metadata on source data
<p>Quality report of the survey for expenditure, revenue, and human resources of public and publically funded institutions for science, research and development (only available in German): “Erhebung der Ausgaben, Einnahmen und des Personals der öffentlichen und öffentlich geförderten Einrichtungen für Wissenschaft, Forschung und Entwicklung“ https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Bildung/einfuehrung.htm</p> <p>and</p> <p>Quality report of national accounting, GDP (only available in German): “Volkswirtschaftliche Gesamtrechnungen, Inlandsprodukt” https://www.destatis.de/DE/Methoden/Qualitaet/Qualitaetsberichte/Volkswirtschaftliche-Gesamtrechnungen/einfuehrung.html</p>
13. Related SDG data series (duplicate indicators or sub-indicators to same indicator)
Not applicable

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